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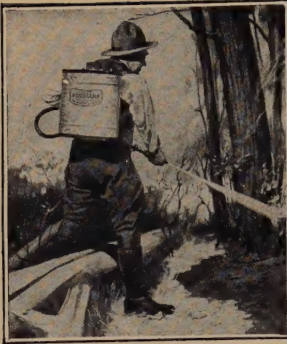
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OFFICIAL ORGAN OF THE SOCIETY OF AMERICAN FORESTERS
A professional journal devoted to all branches of forestry

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JOURNAL OF FORESTRY

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The Society is not responsible, as a body, for the facts and opinions advanced in the papers published by it. Editorials are by the Editor-in-Chief unless otherwise indicated and do not necessarily represent the opinion of the Society as a whole. The "leaders" preceding major articles are to be regarded as editorial additions.

PROCEEDINGS OF THE 33rd ANNUAL MEETING OF THE SOCIETY OF AMERICAN FORESTERS

NEW PFISTER HOTEL, MILWAUKEE, WISCONSIN
DECEMBER 28-29-30, 1933.

FOREWORD BY THE EDITOR

THIS issue of the JOURNAL is devoted to the proceedings of the Society's 33rd annual meeting,—publication in full of the papers presented, and, so far as possible, of the discussions following them. For the benefit of those members of the Society and its friends who were not able to attend, everything that was said and done has been reproduced insofar as space would permit. The program was a distinct departure from the established precedents of the typical "annual meeting." It was an effort to elaborate and improve upon the idea initiated at the San Francisco meeting of a year ago. Instead of a long and over-crowded list of speakers on an overlarge number of unrelated subjects with no time for intelligent consideration of the views expressed, discussion was made the keynote of the program. Five topics were selected, of current, active interest to foresters. The principal speaker, and only he, was asked to come with a prepared paper pre-

senting his views. The discussion leader was asked to prepare himself to comment on those views, favorably or adversely, as he might see fit, but in such a manner as to stimulate further debate and argument. A chairman was selected for each topic session on the basis of his familiarity with the subject in hand and of his skill as a presiding officer to guide the discussion along constructive and profitable lines. Effort was made to take down stenographically everything that everybody said, so that insofar as was humanly possible we have a complete record of the whole proceedings.

It is regrettable that limitations of time prevented submission of the digest of the discussions to the participants for their review before publication. If any participant feels that his remarks were unjustly excluded or incorrectly quoted, the Editor must bear the brunt of the blame and he apologizes right now.

MORNING SESSION, DECEMBER 28, 1933

SUBJECT: RESULTS OF THE TAXATION STUDY

Chairman: Dr. Henry Schmitz, University of Minnesota.

Principal Speaker: Dr. Fred R. Fairchild, Professor of Economics at Yale University, and Director of the Forest Taxation Inquiry.

Discussion Leader: S. T. Dana, Dean, Michigan School of Forestry and Conservation.

PRESIDENT GRANGER opened the meeting at 9:30 A. M. by reading the following letter from the White House:

My dear Mr. Granger:

My greeting and season's best wishes to my fellow-workers in the cause of forest conservation.

The protection, development and proper utilization of our forests is fundamental to our social and cultural well-being. I wish you a successful meeting.

Very sincerely yours,

FRANKLIN D. ROOSEVELT.

The next feature on the program was to have been an address of welcome by Mayor Hoan of Milwaukee. Since, however, he was unavoidably delayed by his official duties and since Dr. Fairchild was forced to leave by 11:30 in order to keep an unbreakable engagement the next day in Philadelphia, Mr. Granger turned the meeting over to Dean Schmitz to proceed immediately with the regular program.

Mayor Hoan came in and gave his address an hour or so later. His remarks were deeply appreciated by all those present.

SUGGESTIONS FOR THE SOLUTION OF THE FOREST TAX PROBLEM

BY FRED ROGERS FAIRCHILD

Professor of Political Economy in Yale University and Director of the U. S. Forest Taxation Inquiry

THE intelligent interest which the forestry profession of America has constantly displayed in the elusive problems of forest taxation makes it highly fitting that I should be privileged to make my first public presentation of a comprehensive program of forest tax reform based upon the studies of the United States Forest Taxation Inquiry before this annual gathering of the Society of American Foresters.

The labors of the Inquiry devoted to its comprehensive investigation of the subject of forest taxation have been drawn

out far beyond the period anticipated when it took up its task. There have been unforeseen obstacles, and the magnitude of the task far exceeded our expectations. The end of this part of the Inquiry's work is however now in sight. The first draft manuscript of the report, except for one chapter, was completed last summer. Since then we have been occupied with the processes of review and criticism and revision. The manuscript is now almost ready for the printer. Certain of our conclusions have already been made public, in particular the discussion of special

plans of forest taxation as contained in our Progress Report Number 18. Nowhere, however, has the Inquiry published its comprehensive program of forest tax reform. This morning I am in position to discuss the forest tax problem with you in the light of the comprehensive investigation of the Forest Taxation Inquiry. While it would of course be idle, in the time at our disposal, to attempt anything approaching a complete review of the Inquiry's report, I shall do my best to lay before you the essence of our conclusions in their true proportions as a unified whole.

It should be understood, however, that the Inquiry's report has not yet been published—that it is in fact still going through the process of official review and revision—and that what I shall present here does not in any sense represent an official or authoritative pronouncement from the U. S. Forest Service or the Department of Agriculture.

Preliminary to the solution of a problem is its precise statement. Were there time, I should like to lay before you a carefully reasoned statement of the real problem of forest taxation as I visualize it as part of the broader problem of American forestry. But, although I turn my back on that important part of my subject with no little reluctance, I can do so with less misgiving in view of the broad knowledge of the subject which I feel confident this audience possesses.

I do wish however to pave the way for my discussion of forest tax reform by sounding a note of warning against certain exaggerated notions of the place of taxation in the forest problem— notions which have an insidious way of creeping into current discussions of this matter.

First let me express my conviction—publicly expressed on frequent occasions heretofore—that taxation is not now and never has been in any broad way the chief factor in determining the time and rate of cutting mature timber or a major

cause of the destruction of American forests. This matter has received long and careful investigation by the Inquiry, and its conclusions—resting on fact and theory and the testimony of the owners themselves—admit, I believe, of no reasonable question.

Equally an exaggeration is the notion that taxation is all that prevents the wide spread investment of private capital in forest growing in the United States. There can be no doubt that the majority of timber owners and of investors generally are not now interested in investing capital in forest growing on cut-over and second-growth lands. The hazards of such investment are regarded by most men as too great. Among these hazards taxation is one. But here again it is not generally the chief factor. Risks of fire and windfall and insect depredations and—perhaps most important of all—uncertainty as to future prices of forest products all stare the investor in the face. The mere time element is enough to deter most investors. Even though taxation were made perfectly equitable, these other hazards would still be controlling to the majority of owners of cut-over land and young growth, in their present state of mind.

Taxation has the least effect where conditions permit sustained yield forestry with realization of income annually or at short intervals.

Putting taxation in its true place in the picture, both of the old-growth forests and of the immature forests and cut-over forest lands, should serve to dispel false and exaggerated hopes of the magic results to be expected from forest tax reform. But if tax reform is not capable of ushering in the millenium in American forestry, it does not follow that there is no problem of forest taxation. As regards the mature forests, though taxation may not have been the controlling factor in past operations, it is one among the considerations that determine cutting poli-

cy. Again, although many forest owners may have little or no interest in investment of capital in timber growing, there is a small group that is interested, and this group appears to be growing. A sound tax system would be of tremendous encouragement to all such. Moreover, among those who are not now interested, there are certainly some—perhaps many—who are deterred by the hazards of taxation. It can be shown that, even though all other conditions might be favorable, the present property tax involves such discriminations and such ruinous possibilities as to present generally a serious obstacle to investment in forest growing on cut-over lands. Whatever may be the other difficulties, it is certain that general interest in forest growing in the cut-over and second-growth regions cannot be expected so long as the unmodified property tax prevails. And even though reform of the tax system will not alone bring realization of the forestry ideal, it will at least remove one obstacle. Thereafter all those who see a future in forest investment under conditions as they otherwise exist will not be held back by an unsound tax system.

If the forest tax problem is ever really to be solved, it must yield to attack from three directions: (1) reduction or check of the heavy and growing cost of state and local government, (2) improvement in the assessment and collection of the property tax, and (3) such modification of the property tax as will adapt it to the peculiarities of forest investment. I am firmly convinced that the relative importance of these three attacks is indicated by the order in which I have named them.

The American people are today staggering under a heavy load of taxation—and a load which has been constantly increasing for a generation and more. The total tax bill—for all grades of government, federal, state, and local—increased from \$875,000,000 in 1890 to \$10,266,-

000,000 in 1930, an increase of more than tenfold. The per capita figures are \$14 and \$83 respectively. Making full allowance for growth of population and wealth and changes in the purchasing power of the dollar, we find that in 1890 the people contributed 7.2 per cent of their total income to government in the form of taxes, while in 1930 the share had exactly doubled, being 14.4 per cent. Federal taxes are only slightly involved in the tax burden on the forests. But state and local taxes alone expanded from \$501,000,000 in 1890 to \$6,798,000,000 in 1930, an increase even greater relatively than for all taxes together. Complete corresponding figures for the years since 1930 are not available, but, with the disastrous decline of national income and the continued increase of governmental costs, the weight of the tax load is today further enormously increased. Is it any wonder that the complaints of the forest owners are loud and bitter?

But let us not overlook the fact that equally insistent complaint is coming from virtually every other taxpaying group which is sufficiently organized to make itself heard. And if the disease is thus general, is it not a reasonable inference that the cause is likewise general and not to be found in some peculiar condition affecting the forests only? Indeed there is no need to rely on inference: the cause stands out clearly enough.

The burden of taxation upon any group or any person is the resultant of just two factors: (1) the total amount that must be raised by taxation, and (2) the methods by which this amount is distributed among the several taxpayers. The first is fixed when the appropriate legislative body, of the state or county or town, determines the functions to be performed by the government and the cost thereof. The second is a matter of equitable distribution, involving methods of taxation and the effectiveness of tax administration. If the taxes borne by forest

property are excessive—or believed to be excessive—the cause must be either that the total tax levies are heavy or that forest property is discriminated against in the structure or the administration of the taxing machinery. Giving full recognition to such unfair discrimination against forest property as does exist under the property tax (to which I shall come later), no intelligent and well informed person can fail to realize that the big predominant cause of heavy timber taxation today is the heavy cost of state and local government.

If this is the chief cause, the remedy is clearly indicated, although the limits of my time permit only the briefest summary. The territory of the United States is subdivided into thousands of minute local governmental units—counties, townships, villages, boroughs, school districts, road districts, drainage districts, etc., set up to meet the needs of a bygone horse-and-buggy age. Abolition and consolidation of the great bulk of these little governments would permit an organization in harmony with modern conditions, would make possible a higher standard of political service, and would tremendously reduce the cost—and the consequent tax burden.

There are certain wilderness regions where there is no excuse for any local governments at all. We should not permit ourselves to be put under obligation to build a long highway to reach a single settler far in the backwoods or to furnish education for his children. Wilderness regions, not already settled, should be closed to settlement, and, where sporadic settlement has already occurred, there would frequently be economy in removing the few settlers and giving them better farms in truly agricultural regions. The truth of this has been fully demonstrated by the State of Maine, where an area equal to nearly half the state is in an "unorganized territory." In this territory practically all local services are provided

by the state; the people are as well cared for as in the neighboring organized towns and at a very much lower cost.

Both what the people demand of government today and the facilities for meeting the demand are vastly different from what existed a hundred years ago; yet our political organization has failed to keep step with this progress. There is room for great saving in cost of government through a re-allocation of the respective functions of state and local governments. Many services, naturally performed by small units in the horse-and-buggy age may now be handled with greater efficiency and economy by larger units. Highways have already gone a long way in this direction. Schools have gone the same way. There is here possibility of substantial reduction in taxation, particularly in those rural regions where the forests are.

I cannot stop further to elaborate upon other means of saving, such as up-to-date financial organization, better political organization, greater popular control of officials through the short ballot and the imposition of greater responsibility upon elected and appointed officials, a greater degree of state control over local finances.

We must, however, not overlook yet another ground for reduction of governmental cost. There may be communities where, even if efficiency and economy were fully attained, the present scale of government services would impose a cost that could not be supported without imposing a burden of taxation greater than can be borne. There are many local communities that are thus living beyond their means. Until such time as a reorganization or a redistribution of functions may bring relief, such communities must reduce their governmental activities or else accept philosophically the "excessive" taxes of which their taxpayers now complain.

It is time that those who are seeking tax relief for the forests faced the facts

and realized that here is the big opportunity. I am becoming more and more impressed with the utter futility of arguing about "yield taxes" and "adjusted property taxes" and all the other devices for changing the method of forest taxation while shutting our eyes to the obtrusive fact that, so long as local governmental costs and the conditions that occasion them are allowed to remain, a heavy burden of forest taxation is bound to remain and may even increase in weight.

Moreover let us note especially that, in approaching our objective along this route, we may enlist the support of all other taxpaying groups. If we seek merely, by some special device, to throw off the burden of forest taxes upon other shoulders, we encountered the natural opposition of all other groups. It is forest tax reform against the field. But all taxpayers are sufferers from these basic causes which make forest taxes heavy. And, when all taxpayers see this and work for the clearly indicated remedies, results will surely come. Here is an opportunity for the advocates of forest tax relief to serve their own ends while helping others and to enlist in a movement that has promise of great accomplishment.

The second line of attack upon the forest tax problem directs its attention to the organization and administration of the property tax, as being the tax chiefly responsible for the burden on the forests. The theory of the property tax is beautifully simple—distribution of the cost of government in proportion to the value of taxable property possessed by each. In its operation the American property tax has become so ineffective as to have called down the reproaches of virtually all tax students, at home and abroad. Assessment is the heart of the property tax, and it is the breakdown of assessment that has made the property tax in so many places a farce. Go into almost any rural district, and you can find par-

cels of property assessed at two or three times their true value, while others get off at a quarter or less—not to mention those that escape entirely the assessor's notice. Obviously, just to the extent that assessment fails, the property tax becomes a travesty of justice. These facts are so well known as to be mere commonplace. The supine acceptance by the American people of this situation is discouraging and humiliating.

Everybody stands either to gain or to lose through the chance or the favoritism of the property tax. On the whole, it appears that forest property stands generally to lose. This common impression is confirmed by the investigations of the Forest Taxation Inquiry. Forest owners and advocates of forest tax relief have therefore every reason to demand reform in the assessment of the property tax.

I am aware that there are those interested in forestry who feel that the property tax is hopeless and who would therefore have their own particular interest desert the ship and launch out on an entirely distinct form of taxation, such as the yield tax. Although confessing to considerable sympathy with this feeling, I am convinced that this is not the way out of our difficulty. The property tax is so firmly embedded in the political and financial structure of American local government that it is not going to be dislodged in the near future. And, while certain classes of property have been taken out from the property tax in certain states—as, for example, the railroads—there are many reasons for believing that no such adjustment is likely in the case of the forests, the chief reason being that real estate is the backbone of the property tax base and has survived everywhere, no matter what other forms of property have been excluded.

I think we may as well accept the property tax as with us for a long time to come and devote our thought and energy to its improvement. This is by no

means an impossible task. Assessment need not necessarily be the farce that it so commonly is. There are principles and methods of sound assessment which are well established. There are expert assessors who know how to do the job and are daily demonstrating the possibility of good assessment and giving to the people of many an American city the advantages of an honest and just distribution of the property tax. The task is different and perhaps in some ways more difficult in the rural districts. But the thing can certainly be done. It requires expert personnel, holding office by non-partisan appointment (not election), working full time, adequately paid. It requires the use of maps—airplane maps are effective and economical—records of sales, orderly recording and indexing of data. Obviously this describes a staff and an equipment which are beyond the means of the ordinary little town or county. Quite so. Assessment should no longer be left in the hands of the little local government of the horse-and-buggy age. Only the large city can today afford good assessment. Rural assessment must be centralized in larger districts. My own conviction is that assessment should ultimately cease to be a local function and be undertaken by the state for all local jurisdictions except possibly the large cities.

Centralized assessment could be accomplished without any infringement of the right of local units to govern themselves. Taxation is governed by state law, which leaves no discretion to the local governments as to the standard of assessment. Local home rule requires only the right to determine the amount of tax revenue to be raised, which is a matter of the tax rate and has nothing to do with the process of assessment.

As I have reminded you, if the forests are excessively taxed, it is either because the cost of government is excessive or because forest property is paying more than its fair share. The latter cause will

in part—frequently in large part—be removed by perfecting the assessment of the property tax. Here is something worth fighting for in the interest of forest tax reform. Here again those who thus seek to serve the interests of the forest owners and the public will find themselves, not opposed to other taxpaying interests generally, but working shoulder to shoulder with all those who want an honest distribution of the costs of government—which group I am sure includes the great majority of the people.

I have spoken thus far of two of the three points from which I think the forest tax problem should be attacked. Success along these lines would go a very long way toward solution of the problem. But not quite the whole way. For it is still to be noted that forest property suffers, not only from faulty tax administration, but also from the inherent nature of the property tax itself. This is a technical matter, with which I believe this audience may be presumed to be familiar. I have myself discussed it on various occasions heretofore. I believe therefore that the briefest summary of the theoretical analysis will be sufficient for our present purpose.

Theoretically the property tax takes a larger portion of the capitalized future net income from an investment whose income is deferred than from a capital instrument yielding a regular annual income equal to the interest on the capital. Thus a deferred yield forest is overburdened under the property tax as compared with property yielding such regular annual income. The excess burden is greater the longer the period of deferment. This applies in particular to second-growth forests not yielding a current income and to old-growth forests held for future disposition. Periodic sustained yield forests, in which the income cycle (period between receipt of principal incomes) is longer than one year, are overburdened, but the amount of ex-

cess burden is not serious if the income cycle is relatively short, say up to four or five years.

On the other hand, the property tax takes a smaller portion of the capitalized future net income from a capital instrument whose net income after taxes is greater than the interest—so that the capital is being exhausted—than from an investment yielding a regular annual net income after taxes equal to the interest on the capital. Thus an old-growth forest which is either being converted to sustained yield, necessitating a reduction in timber value, or which is being destructively exploited, receives favorable treatment from the property tax.

If taxes are wholly capitalized at the time of making the investment, all of the above-mentioned inequalities are taken into account in the initial value of the capital for each type of investment. Thus, under this assumption, no injustice between the several owners could be charged. Nevertheless, the tax burden in the case of a deferred yield investment is far more uncertain. The higher governmental equity in the deferred yield property means a greater effect on the equity remaining in private ownership through unforeseen changes in the tax rate. Also the value of land for the deferred yield use becomes lower by reason of the higher tax burden. Therefore land which would otherwise be used in forest growing for future income might be more profitably employed at some other use. Forestry might have been the more profitable use had there been no property tax. In other words the property tax tends to increase the area of land that cannot be economically used, under private ownership, for growing forests.

The emphasis which I have here placed upon deferment of forest income is not intended to obscure the importance, in the forestry movement, of progress toward organizing forests so as to produce a regular annual income. Obviously when

such condition has been attained, forestry suffers no peculiar disability under the property tax, and the matter of a special method of taxing forest property becomes negligible. Of course even the annual sustained yield forests would still suffer, along with all other classes of taxable property, all the adverse effects of taxation as resulting from heavy costs of government and faulty administration.

Unlike the two lines of reform which have so far been considered, escape from the inherent discrimination of the property tax against deferred yield investments must be sought in tax measures relating especially to the forests. A variety of plans to accomplish this end has been suggested, and some of these have been put into practice (albeit in a half-hearted and ineffective way) in the tax legislation of a number of our states. I propose now to discuss some of the more promising or more popular of these plans and then to present for your considerations certain suggestions which the Forest Taxation Inquiry will recommend.

First, by way of clearing the path, will you permit me to state—dogmatically and without explanation or argument, for which there is not now the time—certain general propositions which I consider fundamental. (1) The problem is not to be solved by uniform fixed assessments of forest property or by specific forest taxes. On the contrary such devices are likely to bring about untoward results which may well be worse than the disease which they seek to cure. (2) Laws which rest for their application upon classification according to the intention of the owner to practise forestry or otherwise to conduct himself are not to be recommended. The intentions of the owner can never furnish an equitable or practicable basis of taxation. (3) I have no interest in optional tax laws. Compulsion is of the very essence of taxation, and forest tax laws, like all other tax laws, should be compulsory and of general applica-

ion within the class to which they relate. (4) Contracts between the state and the taxpayer are no sound part of a tax system. Many such contracts are not bona fide contracts at all. Probably they are all unconstitutional. Their purpose—namely, to deprive future legislatures of the power to amend a tax law—is illegitimate and would be unnecessary under a sound forest tax system.

Of the various plans for relieving the forests from the adverse effects of the property tax, the most popular is of course the yield tax. I am not entirely happy in finding myself compelled to come before you with an adverse opinion on the yield tax. For one thing, it is always agreeable to be aligned with the admirers of the popular favorite. In the second place, I cannot forget that, in some small measure at least, I am myself responsible for the popularity of the yield tax. In extenuation I may urge that the yield tax which I have advocated in the past bore only moderate resemblance to those that have been enacted and recently advocated: I have, for example, never suggested the yield tax for mature timber; and my proposed yield tax for immature timber was hedged about with financial safeguards which have generally been disregarded. At any rate I am here to confess that careful study has now fully convinced me of the unsoundness of the yield tax.

The chief trouble with the yield tax is that it seems impossible to fit it into any existing American system of state and local taxation. At the very outset, a major compromise has been generally conceded, whereby the plan is not the pure yield tax, but a yield tax only in lieu of the property tax on timber, the land remaining under the property tax. A good deal of the theoretical attractiveness of the yield tax is thus sacrificed at the start.

Difficulty next arises as to the rate of the yield tax. Obviously the rate should

be such that forests would bear a burden at least fairly equivalent to the burden of the property tax on other classes of property. As a matter of theory there appears to be no formula for fixing the desired rate except in the roughest sort of way. Actually the rates in the yield tax laws that have been enacted have generally been pulled out of the air with little or no attempt at theoretical justification.

Puzzling questions arise as to whether the rate should be uniform throughout the state, as in the laws that have been enacted, or should be separately fixed for each county or town. Either alternative has advantages and also presents serious difficulties. The uniform state rate offers administrative simplicity, but it would set the forest owner apart, without interest in the finances of the locality in which his property was located. The individual local rate would bring back many of the uncertainties which make the property tax objectionable, and there is moreover no way to make such a rate really fit into the local tax system.

The disposition of the revenue from the yield tax presents embarrassing problems, to which no clear cut solution is indicated. These difficulties are closely associated with the dislocation of local revenue that would inevitably result from substituting the yield tax for the property tax on timber.

It should be noted also that a yield tax adequate to replace the revenue which was furnished by the property tax on timber would generally require a very high rate. Existing statutes contain rates varying from 5 to 12½ per cent; only three states have rates in excess of 10 per cent. In current yield tax discussions rates above 12½ per cent are seldom considered. Yet the studies of the Forest Taxation Inquiry indicate that if the yield tax is not to cause a serious shortage of revenue, on a state-wide basis, owners must be prepared to surrender as much as a fifth of the yield.

Furthermore the separation of timber from the local property tax base would involve a grave danger from the viewpoint of the timber owners themselves. This danger would result from loss of that protection against unequal tax treatment as compared with other taxable property in the same tax district which is enjoyed under the general property tax. A future legislature, hard pressed for funds and dominated by other than timber interests, might raise the yield tax rate to a point that would make this tax more burdensome than the property tax. Justifiable apprehension that the yield tax would place the timber interests in a dangerous position was forcibly expressed by one of the lumbermen representatives at the recent conference on Article X of the Lumber Code. It is pertinent to note that it is this consideration which impels the national banks to cling so tenaciously to that provision of the federal statutes which ties up their taxation with the taxes which the states may apply to other classes of property and income.

The practical experience with yield tax legislation in the United States offers nothing to offset the force of these considerations. Although there has been a fairly long legislative history, with 15 yield tax laws today in effect in 14 states, there has been virtually no experience of real yield taxation. The laws, with only two very recent exceptions, have been optional with the owners. The amount of forest property that has come under these laws is relatively insignificant. Under the recent Oregon (non-optional) law, about 5 per cent of the privately owned forest area has been enrolled. No other state has more than 2.1 per cent of its private forest lands subject to the yield tax law, and in 7 of the 14 states the area enrolled is less than 1 per cent of the private forest area.

The actual effect of the existing laws, so far as experience in taxation of yield

is concerned, is even less than these trifling per cents would indicate. Practically all the forests enrolled under the laws are cut-over lands or those containing young growth. Practically nothing in the way of yield tax has ever been paid in any state. Under the optional laws, owners have not enrolled lands from which they expected to cut timber in the near future; the non-optional laws apply only to cut-over lands. There has been no yield tax revenue to dispose of. Since the forests subject to the laws have contained practically no timber of taxable value, the laws have had no effect upon the property tax revenues.

It is thus—by limiting the laws so that they have been of practically no effect as yield tax laws—that American so-called yield tax legislation has thus far avoided the difficulties inherent in a real yield tax of general application. In particular the ready acceptance of the yield tax principle in certain states has without doubt been impelled by the belief that no substantial yield tax would have to be paid on second-growth stands for a long time to come. If ever the adoption of a yield tax plan of broad application—compulsory like other tax laws, and relating to both growing and mature timber—is seriously considered, it is certain that its adverse effects upon certain forest owners, its lack of any definitely indicated uniform rate, its disturbance of local revenues, and its administrative difficulties and costs will demand careful attention. In view of the availability of other plans which in large measure avoid these difficulties, the yield tax cannot be recommended.

Another device for relieving forests from the disability they suffer under the property tax involves the complete exemption of all immature timber from assessment, while leaving the land value subject to the ordinary property tax. This plan was advocated, as a somewhat rough and ready solution of the problem

of immature forest taxation, by a committee of the National Tax Association in 1922 (of which I was chairman). The principle has been adopted by the State of California in a constitutional amendment. Analysis of this plan discloses that, while it has some advantages, it goes altogether too far in giving an unwarranted special favor to the owners of immature forests. I shall not stop further over this plan.

I come now to three separate suggestions for the special taxation of forests which the Forest Taxation Inquiry, after careful consideration, has concluded will adequately meet the situation and are worthy of recommendation. As we all know, the inherent characteristic of forest investment to which the ordinary property tax is inappropriate is the necessary deferment of income. The appropriateness of the yield tax to this situation is what gives it its chief claim to favor. Each of the plans which I shall now propose is a modification of the property tax, designed to give to forest properties, so far as practicable, the benefits of a net yield tax.

To the first of these plans we have given the name of "adjusted property tax." Theoretically the plan aims to relieve the forest owner from taxation upon the increase in value which comes with the payment of taxes and the accumulation of interest in advance of receipt of income from the forest. In practice it would adjust the current tax base by deducting from the current assessed value of the forest the amount of interest and taxes accumulated to the end of the preceding year. As income is realized, this deduction would be gradually eliminated. Accordingly the deduction in any given year would be equal to: (1) the "pure" interest (approximately the rate paid on long-term, tax-free government bonds) on the assessed value at the beginning of the previous year, (2) plus taxes paid during the previous year, (3) minus income

(from stumpage, etc.) received during the previous year, (4) plus the accumulated deduction made in computing the previous year's tax. When the income exceeds the sum of the other three items no deduction is required. The tax on this reduced tax base is to be paid at the same rate as that applied to other real estate in the taxing district.

The above described plan would give every forest property the income from which is deferred for more than one year a tax that would be less than the usual property tax. The amount of the reduction would be proportional to the deferment of income. Forests yielding substantial annual net income (equal to or greater than the interest and taxes on their current values) would be taxed exactly as under the unmodified property tax.

A concrete illustration of this plan follows:

Assessed value, Jan. 1, 1935 — \$1,000.00

Deduction:

(1) Interest on assessed value of 1934 (\$800)	\$24.00
(2) Taxes in 1934	13.00
Total	37.00
(3) Minus gross income in 1934	60.00
Total	-23.00
(4) Adjusted value increment accumulated to Jan. 1, 1934	150.00
Total: Adjusted value increment accumulated to Jan. 1, 1935	127.00

Adjusted tax base of 1935 — 873.00

Property tax 1935 at 2 per cent 17.46

Another proposal, which we call the "deferred timber tax plan," proceeds quite differently toward the same goal, by relieving the forest owner from taxes on timber in years when he has no income from his forest and requiring payment of a tax to the state in the years when

there is a net yield. This timber tax would be the smaller of the following two amounts: first, the deferred property taxes on the timber, accumulated without interest; second, definite portion, fixed by law, of the stumpage value of the timber when cut and of other gross income from utilization or sale of forest products. This limiting yield tax rate should be high enough to cover the accumulated property taxes under the most unfavorable conditions of forest management that could reasonably be anticipated. A recommended limiting rate of 40 per cent is based upon calculations involving both second-growth and old-growth timber.

The loss in current property tax revenues would be made good through annual payments from a state timber tax fund set up for that purpose. This fund would receive all taxes paid on timber and would be further supplemented to the extent necessary by state-wide taxation. In this way the carrying charges on timber taxes which heretofore had been levied prior to the receipt of income from timber would be lifted from forest property and spread over all property in the state.

The property tax on land value would be due and payable annually to the local tax collector, in the same manner as any other property tax. Any value due to the expectation of income from sources other than forest products would be automatically taxed by retaining the property tax on the land value.

A third plan, which may be considered worthy of attention, makes no pretense to the rather close adjustment which would be accomplished by either the adjusted property tax or the deferred timber tax, but has the advantage of extreme simplicity and the minimum of administrative machinery. We have called this plan the "differential timber tax." Leaving the land subject to the regular property tax, it would offer to second-

growth forests a differential tax on timber. The assessed value of timber, determined in the ordinary way, would be reduced by a specified rate known as the "reduction factor." This factor would usually be uniform throughout the state and would be so calculated as to give forest properties subject to a standard or typical degree of income deferment a tax burden equivalent to that of a net yield tax. The reduction factor would be prescribed by law, 50 per cent being regarded as the maximum. Forests subject to a deferment of income greater than normal would be obliged to bear a somewhat heavier tax burden than that of a net yield tax, but much less than that of the property tax. On the other hand, forests which were so regulated as to receive substantial income at shorter intervals than indicated by the standard income cycle would enjoy a lighter tax burden than that of a net yield tax.

This plan would also grant old-growth forests the benefit of a reduction factor applicable to timber value, at a graduated rate of 5 per cent for each year from the effective date, with a maximum equal to the second-growth reduction factor. This provision would at the outset apply only to forests which were completely withheld from commercial operation. After a transition period of at least 20 years, all old-growth forests would be given the same exemption as second-growth forests. In states where old-growth forests were of little importance as an element in the tax base, they would be treated in the same way as second-growth from the beginning.

I have suggested that the solution of the forest tax problem will be reached only when we succeed in (1) reducing or at least limiting the cost of state and local government, (2) perfecting the assessment of the property tax, and (3) providing some modification of the property tax which will adjust it to the pecu-

liar nature of the deferred yield forest. Either of the first two reforms would accomplish its full effect whether the third were effected or not. The third reform, on the contrary, while doubtless worth securing by itself, would be of limited usefulness and might even fail entirely of beneficial results in case nothing were accomplished in the way of reducing governmental costs or enforcing

the strict observance of sound assessing methods. It should be always remembered that neither the adjusted property tax nor either of the other special forest tax plans which I have recommended is to be regarded as the solution of the forest tax problem. Such plan is simply one—and probably the least important one—of the three parts which make up the whole program of forest tax reform.

COMMENTS

By SAMUEL T. DANA

Dean, School of Forestry and Conservation, University of Michigan

DISCUSSIONS without disagreements are pretty certain to be as profitless as they are uninteresting. I presume that it is therefore incumbent on me to raise at least some question concerning the findings of the Forest Taxation Inquiry, although I must confess to considerable trepidation in venturing to criticize the results of so exhaustive an investigation. The task is all the more difficult because I find myself in such complete accord with much of Dr. Fairchild's presentation.

In particular, I like his emphasis on the fact that modification of the general property tax is the least important of the steps necessary for a satisfactory solution of the forest tax problem. That problem exists primarily because expenditures for local government are excessive in relation to the resources by which they must be supported, and because valuations of forest properties are unduly high in relation to their income-producing ability. Consequently, reduction of the tax load through more economical and effective governmental organization and administration, and fair distribution of that load as between different classes of property through better assessment and collection

of the property tax, are matters of basic importance. In these respects the interests of forest owners and of other taxpayers are identical, so that coöperation in effecting reforms should not be difficult to obtain.

Improvements in these directions, coupled with the present tendency to rely less and less on the general property tax as the main source of revenue, will progressively lessen the need for modifying the property tax which foresters generally have regarded as imperative. Nevertheless, there are certain inequalities inherent in the application of the unmodified property tax to forests with different types of income. Dr. Fairchild suggests three methods for meeting this situation, and it is with reference to these proposed remedies that difference of opinion may well exist.

The first method, designated as the "adjusted property tax," each year makes certain subtractions from and additions to the assessed value of the property in order to establish an approximate parity in the tax on sustained yield and deferred yield forests. It is mathematically sound, but is so complicated and difficult to understand that its general

adoption seems to me unlikely, and its successful application, if adopted, decidedly problematical. In spite of its ingenuity I am, therefore, inclined to be somewhat skeptical of its value as a measure of practical tax reform.

The second method, called the "deferred timber tax plan," imposes an annual tax on the value of the land but relieves the owner from any tax on the timber during years when there is no net yield. When cutting takes place, the owner must pay either the accumulated property taxes without interest, or a specified percentage of the stumpage value of the timber, whichever is the smaller. The loss in current property tax revenues would be made good through a state timber tax fund consisting of receipts from timber taxes and from state-wide taxation of other properties. This plan appears to have a good deal in common with some of the yield tax schemes which have been proposed and which are reported on adversely elsewhere in Dr. Fairchild's paper. Its apparently very favorable treatment of the timberland owner, and especially the shifting of carrying charges on timber taxes to other property, make popular approval decidedly doubtful.

The third method, called the "differential timber tax," leaves the land subject to the regular property tax, but reduces the assessed value of the timber for tax purposes by certain fixed percentages depending on the length of the income cycle. The method is simpler to understand and to apply than either of the other two methods, but is correspondingly less precise in equalizing the tax burden on different types of forest. In appearance at least it seems to offer a direct subsidy to timberland owners which is almost certain to create general opposition to it on the part of other taxpayers.

All three methods leave the owner of a sustained yield forest property in practically the same position as under the

unmodified property tax, but offer distinct advantages to the owner of a deferred yield forest. General support of any one or all these plans is consequently to be expected from timberland owners except as they may feel the chances of their adoption to be so remote as not to justify active efforts in their behalf.

From the public standpoint the case is not so clear. This is chiefly because there is no assurance that the advantages accruing to the owner will lead to better forest management. On the contrary, any one of the three methods apparently tends to encourage both the holding of merchantable timber for speculative purposes and its rapid depletion whenever cutting is undertaken. This being the case, is it not going to be difficult to justify especially favorable treatment of timberland owners as compared with speculative ownership of other natural resources, such, for example, as urban real estate or mineral properties, especially in view of the fact that the disadvantage under which a deferred yield property labors can be largely removed by capitalizing anticipated taxes in determining its present worth? With a fair valuation of forest properties, it is an open question whether the unmodified property tax is not all that the timberland can reasonably ask unless more favorable treatment is accompanied by measures guaranteeing a form of forest management that will clearly be in the public interest.

This brings me to two matters in which I fear I am at variance with Dr. Fairchild. In the first place, if I correctly understand his position, he would determine the value of any given forest property for assessment purposes on the basis of the returns to be expected from the prevailing methods of handling lands of the same general character in the region concerned, without any reference to the management plans of that particular owner. This means that some owners will fare better and others worse than the

verage; and in regions where prompt liquidation is the common practice, as is now true in many parts of the United States, it will mean so high a valuation as virtually to preclude the possibility of sustained yield management.

It seems to me much fairer and much more conducive to improved forest practice to take the owner's plans into consideration in the determination of present values. Properties being rapidly depleted would then be assessed at a higher value than similar properties under sustained yield, as I believe they should be; and the assessed value of each property would have a direct relation to the income expected from it. Determination of present worth unavoidably necessitates the estimate of returns under some plan of management; why not use that of the owner instead of some mythical average operator?

Secondly, I see no vital objection to using the taxing power as a means of promoting some desirable practice, or discouraging some undesirable one. Certainly taxation has been used in that way in the past, and with judicial approval. Thus Chief Justice Taft once remarked that "taxes are occasionally imposed in the discretion of the legislature on proper subjects with the primary motive of obtaining revenue from them and with the incidental motive of discouraging them by making their continuance onerous. They do not lose their character as taxes because of their incidental motive." Consequently if timberland owners are to receive preferential treatment as compared with other land owners, whether under one of Dr. Fairchild's suggested modifications of the property tax, or any other proposal, I should favor accompanying such treatment by regulatory provisions aimed at insuring reasonably satisfactory management, unless such provisions are already in effect as a result of other legislation or of some device such as the lumber code.

This discussion would be incomplete without at least brief reference to the yield tax which has been so widely advocated. Dr. Fairchild rejects this method of taxation, whether in its pure or modified form, as a substitute for the general property tax. His arguments appear to me sound. Nevertheless the yield tax has certain obvious advantages which make it seem unwise to discard it entirely from further consideration. Its chief field of usefulness would seem to be with second growth forests, where the accurate determination of present worth is particularly difficult. Even with merchantable timber, however, it may prove a useful tool in affording relief from excessive taxation until more basic remedies can be applied, and also, in combination with regulatory provisions, in furthering improved forest practice.

In conclusion, let me say that I see no short cut solution to the forest tax problem. Greater economy and efficiency in government, and better methods of tax assessments and collection, including particularly the valuation of forest properties on the basis of their income-producing ability, are the long and winding roads that offer the most promise of improvement. Given these, the unmodified property tax seems to me a workable instrument for forest properties generally and unquestionably for properties under sustained yield management. My chief questions regarding Dr. Fairchild's proposed modifications have to do first with the practicality of their adoption and application, and secondly, with their preferential treatment of the timberland owner as compared with other owners of deferred yield properties without at the same time requiring satisfactory forest management. The latter can be attained most effectively under specific plans for specific tracts. My own hobby, is the valuation of forest properties, preferably by a central assessing authority, on the basis of management

plans satisfactory to the state conservation department. Probably this scheme is also impracticable of immediate state-wide application. As a step in that direction I therefore suggest an arrangement whereby owners who voluntarily submit plans of this sort would be guaranteed fair valuation of their properties under the property tax (whether modified or unmod-

ified), or would be placed under a yield tax in states where this course seems preferable. While constituting no panacea for present difficulties, such action would emphasize and should facilitate progress toward sustained yield management as the goal in which private owners and the general public are alike interested.

DISCUSSION

Following these remarks Dr. Fairchild was obliged to leave the meeting in order to catch a train for Philadelphia, but before leaving he stated that Mr. DeVries of the Forest Taxation Inquiry would act as its representative in the discussion which was to follow.

After Dr. Fairchild's departure, Professor Hosmer continued the discussion. He said, that with many other foresters he was eagerly awaiting the Report of the Taxation Inquiry, for while he had been privileged to see certain chapters of it, it was obviously impossible to come to an adequate understanding of that report without the chapters which explain in detail the basis on which rest the conclusions of the Inquiry.

Many foresters have been advocates of the yield tax idea, which until recently seemed to be the most reasonable of the plans advanced. But every one realizes that most of the yield tax laws of today are sadly deficient in a number of ways. There seems hope of modification, however, after such laws as those of Oregon (the compulsory inclusion, under the plan, of all those in a given tax class) and of Wisconsin (where the state advance money each year to the local communities) have had longer trial. If, however, the Taxation Inquiry has a plan that can be shown really to be better,

many will be willing to go over to it.

Certain essentials are rightly demanded of any forest tax law that is to command respect, as has been repeatedly pointed out by Professor Fairchild and other taxation experts. Such a law must be just, sane, in line with economic principles, and *workable*. It might be added that it must provide revenue each year to the local community, though this is really included under the word "just" (to all concerned). The county or town, as well as the land owner, is here to be considered. Perhaps the greatest stumbling block is to make a forest taxation law *workable*. It is hoped that the Taxation Inquiry can demonstrate that its proposals meet this requirement.

Mr. Hosmer then said that he should like to ask several questions, directed to the representative of the Inquiry (Mr. DeVries). These were asked in no spirit of criticism or controversy, but rather as by one who was seeking information on what is at best a complex problem. He hoped that they might be answered, if not in this conference, at least later in the pages of the JOURNAL OF FORESTRY.

1. Many American foresters are in agreement with Professor Fairchild's thesis that the real solution of this, and other, problems turns finally on a reorganization of the administrative set-up of

our local governments in the United States. But as such drastic reforms as are apparently needed must necessarily be slow of accomplishment, what of the immediate future? Specifically: Do the proposals of the Inquiry have to await the desired reorganization, or by some adjustments can they be made to apply under the existing set-up? If the answer is that they can be made to work now; under which of the three plans proposed are the best results likely to be got?

2. Professor Fairchild has at various times in the past suggested that the state act as banker in advancing to the counties or towns the money needed for annual expenses—this with the assumption that ultimately the state would be reimbursed, when the yield taxes come to be paid. Question: Under Plan No. 2, "Deferred Timber Tax" is, or is not, this earlier idea of Dr. Fairchild's essentially put into effect?

3. How does this Plan No. 2 compare with a *good* yield tax law as to the amount that has to be paid by the forest owner.

4. How does the Taxation Inquiry answer the question that has been raised by Dr. Wilson Compton, on behalf of the National Lumber Manufacturers' Association, and others, in recent statements put out in connection with the Lumber Code conferences, to wit: How can the popular interest and support that has been painfully built up during the past 20 years, in favor of the yield tax idea, be turned to account now, with these seemingly different plans? Is there not grave danger that more will be lost than gained if the yield tax idea is now scrapped? It is not possible by some, even if it be a drastic revision of existing yield tax laws to continue to hold the interest and support of an influential section of the public, who have been educated to believe that the basic idea of a yield tax on the growing timber (the land

itself to be taxed annually under the general property tax) could be perfected (with due allowance for changes in the amount of the tax, for compulsory rather than permissive classification, and for other changes from existing laws) until a law could be framed that would be just, sane, satisfactory from the economic standpoint and workable?

If we lose the interest and support that now exists for the yield tax idea, will a set back not result that will seriously delay general progress in this whole phase of taxation reform?

Mr. DeVries answered the first question put by Mr. Hosmer by saying that the proposals of the Inquiry do not have to await local government reorganization or improved administration of the property tax, but that the full benefits to be derived from their application will not be realized with inefficient local organization and lax administration of the tax laws. To the second part of this question he stated that as between the three plans proposed the best results from the standpoint of relieving deferred yield forests under present conditions could be got from the deferred timber tax. For, under this plan the tax relief to deferred yield forests would be immediate and drastic and could not be easily voided by bad assessment.

In answer to the second question put by Mr. Hosmer, Mr. DeVries stated that Dr. Fairchild's early idea of having the state act as banker was in fact incorporated in the deferred timber tax plan, although in the deferred timber tax plan the amount of money advanced to the counties or towns by the state is not primarily dependent upon tax income received but rather is determined by the current tax needs of the local government.

To question number 3—How does deferred timber tax compare with a *good* yield tax law as to the amount that has to be paid by the forest owner?—Mr.

DeVries stated that a good yield tax should result in a tax closely adjusted to a net income tax and should be adjusted to the tax requirements of the local governments and to the tax burden of the other taxpaying interests. Such a good yield tax would require the owner to pay an amount equal to that paid by the forest owner under the deferred timber tax. However, the Inquiry has been unable to devise a good yield tax.

As to the loss in popular interest and support due to the abandonment of the yield tax, Mr. DeVries said that the Forest Taxation Inquiry had been called upon as a scientific research organization to consider the yield tax and all other proposals in an impartial manner. It has given its conclusions from this viewpoint.

If, as the Inquiry believes, it has demonstrated that the yield tax is unsound and impracticable, the fact that interest has been aroused in the yield tax in the past would certainly offer no ground for seeking to persuade the states to adopt an unsound tax plan in preference to other sound plans which will accomplish the essential purposes of the yield tax. On the other hand, it is proper to suggest that the enthusiasm for the yield tax may have been exaggerated. An attempt in Oregon last year to extend the yield tax to mature timber, which was pushed with considerable vigor by the yield tax advocates, was defeated in the legislature, largely, it is understood, on account of the opposition of many timber owners. The so-called yield tax laws of Michigan and Wisconsin are, so far as their practical operation goes, yield taxes in name only. The important feature of these taxes is the contributions from the state to the counties. The yield tax feature is at present and will for a long time be practically negligible. It is doubtful if support of such laws as these indicates

any great enthusiasm for the yield tax principle.

However, the interest in the yield tax may be turned to account for any one of the new plans by emphasizing in all publicity material that the new plan has precisely the same objective as the yield tax; namely, adjustment of taxation on forests to income deferment, and that the new plan is better designed than the yield tax to accomplish this objective in a satisfactory manner.

In regard to questions raised by Mr. Dana as to whether the owner was entitled to ask for a tax favor without doing anything in return, Mr. DeVries answered that forest property is discriminated against by the property tax, which means that the owners are paying more taxes than they should. If we relieve them of any taxation it means that a larger share of government costs must be borne by other owners. That is true under the yield tax or any other plan of relief to forest property. The deferred timber tax plan makes it very plain that the carrying charges on taxes are removed from the tax burden on forest property and placed on the state as a whole. We are not interested in helping the forest land owner, but we are concerned with the effect of taxation on land utilization. Tax discrimination which results from deferment of income will tend to drive lands out of forest use. It has been stated that the adjusted property tax favors forest depletion. This is true only in the sense that under it the forest which is being depleted pays the same taxes as under the usual property tax, and is not required to pay any additional tax as a penalty for depletion (as it is not under the property tax). Moreover the existing tax differential in favor of a forest being depleted as compared with one which is being built up in value would be decreased by the adoption of the adjusted property tax.

At this time Mr. Chapman took the floor as a member of the Forest Taxation Inquiry. He said that we faced the concrete problem of whether we are going to require the forests to pay a greater burden of taxes than other property. He called attention to Mr. Dana's statement that the same tax discrimination was placed upon undeveloped city property as upon deferred yield forest property and said that there was a definite difference between those two classes of property. The taxation of undeveloped city property in advance of income encourages the owner to develop that property, which is in the public interest. The taxation of forests in advance of income provides an excess burden which encourages the owner to develop the property for other purposes. That is the distinction which is so vital to the public. If we seek merely to tax forests on the same equitable basis as any other property, then we must do something to reduce the present amount of these taxes. This, the Taxation Inquiry has attempted to do. The Taxation Inquiry has not attempted to give forests an exemption or subsidy. It is my belief that the proposal most recently made (a deferred timber tax) places a challenge to the public as to whether or not it is going to talk turkey or whether it proposes to leave the whole system of taxation exactly the same as now. The forests are to be taxed on assessed value. The amount of the tax is computed in the same way as under the property tax. No favor would be shown in any way to forests. Let that be taken care of in other ways. We have a whole lot of talk about the necessity of financing forest operations, credit to lumbermen, etc. Here is what the public can do. Pay the tax on the timber at its assessed value. Pay it to the local governments. Hold this tax as a lien against that property and when that property produces revenue

the amount is paid back to the state. The state is the banker. If the people feel that this excess burden should be taken off of forests, it can be done in that way. The figures of the Forest Taxation Inquiry show that the amount imposed upon the taxpayers of the state is within a reasonable sum. It is possible to tackle this problem. I want to emphasize that I believe the Taxation Inquiry has presented a favorable, equitable, workable scheme which is sincere. It should be considered seriously by the foresters as a practical thing to adopt.

This whole scheme of using a forest tax system for something else than its primary and sole purpose of raising revenue is not going to work, in my opinion.

The Chairman said that he would like to hear one of the lumbermen give some consideration to the questions which have been raised, and asked Mr. Goodman if he would be willing to give his opinion concerning the proposals of the Forest Taxation Inquiry. Mr. Goodman said that he was much interested in the three proposals for forest taxation and that Mr. Chapman's statements confirmed his opinion regarding them. He then asked if it were true that the Forest Taxation Inquiry had now abandoned the adjusted property tax as a recommended proposal. To this Mr. DeVries replied in the negative. Mr. Goodman mentioned the fact that earlier progress reports of the Inquiry assumed that timber properties would increase in value. He said that he was not pessimistic but extremely optimistic and believed that timber values were going to remain stationary in the future and are not going to decline below the reasonable going price which Wisconsin uses in making their state valuations. He then asked if the adjusted property tax over a 20-year period of stationary valuation would not take forest property entirely off the tax roll and relieve

the taxpayer from paying any tax on property.

Mr. DeVries replied that there was a provision in the adjusted property tax plan that the tax shall never be less than the tax rate times the bare land value. Therefore, if forest property values remain absolutely stationary for 20 year, that is, were not influenced by the approach of expected income, or by the reduced taxes due to the adoption of the adjusted property tax, then it is true that the tax base at the end of a 20-year period would be reduced to a bare land value. However, if Mr. Goodman is right as to the future course of timber values, no private owner can possibly afford to hold a timber property that is not growing in volume. In the case of a property not growing in volume, it seems to the Inquiry that the present value must be lower than the future value, or the holding of such a property could not be justified on economic grounds.

Mr. Herbert enlarged upon the point as to the enhancement of forest values by saying that if an owner had a piece of virgin timber worth \$10,000 today, and it was not to increase in value in the future, he would sell and obtain his \$10,000 today and get interest on that amount somewhere rather than leave it in forest property.

Mr. Goodman stated that it had been his experience, that you run up against opposition in the state legislatures when you advance any proposal which would lower the tax bill of the large timber holding companies. Whether just or unjust, a lowering of the tax on these properties means, in the minds of the public and in the minds of the legislature, a subsidy, no matter what other name it may go by. We have never been able to sell the idea with yield tax bills.

Mr. DeVries replied that the Inquiry proposals would require forest property to bear their full share of the tax burden.

The plan should not be advanced with the idea of relieving persons or land holding companies from taxation, but rather as a measure to remove a discriminatory tax which had an influence on land utilization contrary to the public interest.

Mr. Goodman continued by saying that he would take serious exception to what had been said about the local government situation. These 240,000 local governments in this country are the foundations of our idea of democracy. They are the most efficient governments in the world, in our country and in each state. In talking about the number of officials, Mr. Goodman said that his salary as chairman of the town board is \$100 per year, and that he put in \$1,000 worth of work for that community. That is good economy for the town. The next point he mentioned was that if we do not keep government close to the people, but centralize it, we take away their interest in government, and that is a bad thing. He said that he, in association with the professors of political economy in Wisconsin, had given this subject an intensive study for the past four or five years and had made a report. He made the point that the fact that the cost of government per capita is high is no proof that it is inefficient. With scattering population government is less efficient. He endorsed the proposal providing for the removal of scattering population in wilderness areas which had been mentioned by Dr. Fairchild. He said that members of the state administration and University of Wisconsin have been to Washington and are promised the development of a plan under which, through some similar undertaking as the CWA, federal funds will be obtained for the removing of scattered settlers from the forest zones. Removing the scattered settlers will produce an entirely different set-up for forest taxation.

Mr. Herbert, a former member of the Inquiry, disagreed with Dr. Fairchild's first point regarding economy in government. It was his opinion that a great deal larger share of our income will be paid in taxes within the next 25 years. Many timber owners will pay more timber taxes for the reason that they are now favored by a very low assessment. This situation is often due to the fact that the assessor is one of their own employees. Mr. Herbert disagreed with Mr. Hosmer's remarks regarding the time involved in the readjustment of communities and the government financial structure. A proposal by the New York State Director of Budget that all taxes be collected by the federal government was cited as an illustration of the possibility of rapid change in financial organization of local governments. As to the question of subsidizing forestry through taxation, Mr. Herbert said that it should not be considered as a prerequisite to the practice of forestry in this country. Private forestry should stand on its own feet.

Mr. Howe of the University of Toronto mentioned the experience of the Province of Ontario in transferring settlers from the wilderness areas. In areas in central Ontario, which are the exact replica of Michigan pineries, between 30,000 and 40,000 square miles are practically deserted on account of repeated forest fires. About five or six years ago the Ontario government conceived the idea of moving the settlers out of that area. They moved 15 families, the total population of about 4 townships, to a belt of good agricultural land farther north. Only 5 of the 15 families stayed on the good agricultural land after being moved. There is a psychological and sociological aspect to the problem. The men who are stranded in the wilderness area are old men. The young and aggressive men have gotten out. Men who are 50 or 60 years old cannot be successfully transplanted

into a new community with new conditions. This project in Ontario has been dropped because of the present financial condition, and it is very doubtful whether it will be continued when times are better. The government regards the project as a failure because of the character of people they were trying to transfer.

Mr. M. J. Fox of Michigan brought out the point that the forest owners are maintaining more or less of a public park. The forest owners pay taxes, insurance, interest, and underwrite all hazards while their property is free to the public to hunt, fish, and have the happiness that they should. For this reason forests present an entirely different problem from iron mines, homes, farms, and places of business, since in the latter the owners do not allow the public possession of them.

Mr. J. H. Allison raised the question as to whether the adjusted property tax does not call for reassessment of second-growth timber at frequent intervals in order to carry out the scheme. Mr. DeVries replied by saying that a good many states provide by law for a reassessment every year, but some states provide for a reassessment at intervals as long as five or six years. The adjusted property tax contemplates no change in this procedure. A provision in the adjusted property tax plan provides for computing the adjusted value increment whenever a reassessment is required by law, whether that be every year or every six years.

Mr. Ramsdell stated that there had been a good deal of objection to yield tax measures because of the lack of precise manner of levying and because they have resulted in an immediate reduction in the tax bill or shifting of the burden. He said that he was not able to see the difference between the yield tax and the present proposals of the Inquiry, and said that the proposals of the Inquiry

would bring up resentment because of these objections.

Mr. Chapman replied by saying that the yield tax has been considered wholly from the standpoint of benefit to the owner. It is always falling down when it comes to the public. The public is to be considered as well as the owner. The public wants the money to spend. The owner wants to pay when he gets the money. The trouble with the yield tax is that it is not adjusted to the needs of the community. The owner does not know that what he will have to pay will have any relation to the tax burdens of other taxpaying interests. In the future this sum may be entirely out of adjustment. Mr. Chapman said that he favored the new scheme because it gives the public the advantage of a yield tax and at the same time does not disrupt the system which requires that forest property shall stand the same tax burden as other property. The owner pays taxes when he gets his yield. He pays exactly what he would have paid when assessed. The only difference is the deferment of payment which gives him the advantage he wants. He can pay when he cuts. It does not disrupt local government finances. We want to take off the curse of making the forest pay more than it should. The public will pay the taxes and wait for its money.

Mr. Herbert suggested that federal government loans to the states might be made for the purpose of setting up the timber tax funds under the deferred timber tax plan.

Mr. L. E. Skellenger referred back to Mr. Howe's discussion of transferring settlers in Ontario, saying that these experiences can hardly be cited as a criterion for forest communities. Perhaps individuals in the United States would stick on the land. He expressed certainty that the development of the forest community idea from the national government viewpoint will work successfully.

Mr. Watzek, speaking particularly with regard to young-growth timber, said that he hated to see the yield tax given up entirely. He said that it appeared to be very practical from an operating standpoint. If the owner starts out to get a sustained yield operation, cuts a little easier, and leaves the forest in a little better shape, what is it going to cost him to do it? He can figure the value being left on the land and the cost of fire protection, but cannot figure definitely on the taxes 30 or 40 years from now. Mr. Watzek asked if there was anything in the Forest Taxation Inquiry report that deals with the certainty of taxes on young-growth timber over a period of years. The early Louisiana forest tax law provided for putting land under a contract for 40 years. This was reduced to 30 years and then reduced to 20 years. This uncertainty in the minds of a lot of operators prevented them from setting up a real business proposition of starting out to regrow forests. Mr. Watzek considered the second point in Dr. Fairchild's report to be the best of the three but was disappointed in that there was nothing in the report that would make it possible to know over a period taken to grow timber and what the taxes were going to be.

Mr. DeVries replied that improved assessment, which is involved in the second point of Dr. Fairchild's address, would go a long way in enabling an owner to predict future tax costs. If discrimination in assessment is eliminated, the property tax rates on full value do not vary greatly over a period of years. However, the forest owner should always have to bear his share of the budget requirements of the community. As there is no way to predict the tax needs of local governments 40 to 50 years from now, the Inquiry finds it impossible to provide a plan whereby the owner could predict with certainty his future tax burden.

Mr. Dana said that it was not entirely clear to him as to the difference between the 40 per cent limitation of the deferred timber tax and the yield tax as applied to second-growth timber.

Mr. Chapman replied that the deferred timber tax was a scheme whereby the tax paid at the time of cutting was limited to 40 per cent of the stumpage value of the yield. The deferred timber tax is based upon the assessed value of the timber during years in which the yield is deferred, a feature which the yield tax does not have. The deferred timber tax contains features providing for the maintenance of annual revenue to local governments, a feature which the yield tax does not have. The trouble with the yield tax is that the public does not get its revenue now, and in the second place the burden is adjusted now for something to happen 50 years from now.

Mr. Dana stated that after all the proposal limits the tax to 40 per cent of the income from the stumpage, but that there are also the taxes on the land which are paid from time to time and which may make much more than the 40 per cent over a long period of time.

Mr. Ramsdell asked if this tax would be 40 per cent and not over 40 per cent in the future.

Mr. Chapman replied that this scheme limits the payment to 40 per cent and prevents excessive taxation.

Mr. Ramsdell stated that the lumberman is interested in whether the 40 per cent will be equitable to him. It was his opinion that this will depend on the method of assessing it, and this is the principal objection of the owner.

Mr. Chapman replied that the value of the stumpage would have to be properly arrived at. Fair assessment is the criterion of any taxation. The taxes assessed on the property would have to be paid. The owner would not have to pay any more when the timber is cut than he does now. Under the deferred timber tax scheme the public would have to bear the burden if the taxes amounted to more than 40 per cent. If less the owner would pay only the exact amount levied.

In concluding the argument, Mr. DeVries stated that the deferred timber tax has none of the disadvantages of the yield tax which were enumerated in the paper presented by Dr. Fairchild. He regretted that the 40 per cent provision of this plan had caused considerable misunderstanding. A limiting provision was put in the plan to meet the situation in case the owner obtained a small intermediate yield after a period of 20 to 30 years without income. It would be obviously unfair to require him to pay all deferred taxes, for that would probably be many times his gross income. This limiting rate is made low enough so as not to unduly influence any cutting program. A second reason for inserting the 40 per cent limitation is to protect the owner against the confiscation of his property in the case of a severe loss by fire or other cause. Without the 40 per cent limitation the accrued taxes might amount to as much as or many times the value of the salvage. The 40 per cent limitation rate may almost be dismissed from mind in any consideration of this plan, for it will come into operation only under the exceptional circumstances which have been mentioned.

AFTERNOON SESSION, DECEMBER 28, 1933

SUBJECT: THE LUMBERMAN'S CODE AND CONSERVATION

Chairman: S. T. Dana, Dean, Michigan School of Forestry and Conservation.

Principal Speakers: John Watzek, Jr., of Chicago, of the Crosset, Watzek and Gates interests, with extensive timber holdings and operations in the South and West, and a member of the National Lumber Code Authority. R. B. Goodman, Marinette, Wisconsin, northern hemlock and hardwood owner and operator and chairman of the Wisconsin Conservation Commission.

Discussion Leader: Russell Watson, Milwaukee, Wisconsin, of the firm of Banzhaf and Watson, consulting and practicing foresters.

Chairman Dana: This topic deals primarily with Article X of the Lumber Industry Code but is not necessarily limited to that part of the Code, other portions of which may have real interest in conservation. Discussion may include any phase of the development of private forestry.

There has been discussion for some years relative to the lack of progress in private forestry and there is very great hope that the Code of competition for the lumber and timber products industry approved last August will inaugurate a new era and make possible the practice of private forestry on a scale not known previously. It was originally hoped that Mr. C. C. Sheppard, President of the National Lumber Manufacturers' Association could be here to talk upon the subject. Unfortunately he was unable to be present. He has just sent us this wire:

Greetings to Society American Foresters. Regret exceedingly I could not attend your annual meeting. Am very enthusiastic over possibilities for constructive program for forestry under lumber code and will appreciate copies of

any papers presented at your meeting on this most important subject.

C. C. SHEPPARD.

Two men will lead the discussion for us. One will present the subject primarily from the standpoint of industry—the other from the standpoint of the public. Mr. John Watzek, Jr., of Chicago, a member of the National Lumber Code Authority, who is intimately in touch with the administrative features of the whole lumber code, will present the former view. He is connected with the Crosset Lumber Company in Arkansas which has been particularly active in the practice of fire protection, selective logging and plans for sustained yield. Within the last few months this Company has undertaken a very thoroughgoing study of selective logging and sustained yield on its Arkansas holdings and has 20,000 acres marked for selective logging with the idea of extending this in the near future in the hope that the work done on these areas will prove the feasibility of putting their entire holdings on a sustained yield basis. He comes to us as representative of industry, keenly interested in forestry practice.

THE LUMBER CODE AND CONSERVATION

By J. W. WATZEK, JR.

Member, Lumber Code Authority

AT THE request of Mr. C. M. Granger, your president, I am pinch-hitting here today for "Shep." In case some of you do not know "Shep" by his nickname, in lumber circles of the South as past-president of the Southern Pine Association, and now in national circles as president of the National Lumber Manufacturers Association and a member of the Control Committee of the Lumber Code Authority, he is Mr. C. C. Shepard of Clarks, Louisiana. It is very much your loss that, due to the meeting of the Control Committee in Portland, Oregon, it was impossible for him to accept your kind invitation to talk to you on the above subject. He is infinitely better qualified to discuss it than I. I consider it an honor to be permitted the pleasure of pinch-hitting for "Shep," and will do my best not to "fan," but I am warning you in advance that my substituting for "Shep" is about like Joe McCarthy sending a player from the bench to hit for Babe Ruth when a home run is essential.

In any discussion of the Lumber Code with reference to conservation, some lumbermen and conservationists think exclusively of Article X. This is probably because of its title—"Conservation and Sustained Production of Forest Resources." As a matter of fact there are many articles in the Code that tie themselves closely to conservation. The articles pertaining to minimum wages, hours of labor, production control, cost protection and others, and many of the rules of fair trade practice, are closely allied to conservation. There are many reasons for this but the principal one is that the Code will make for prosperity in the

lumber business, without which no real progress in conservation is possible. Private forestry has lagged in the United States because many lumbermen lost faith in the future of their business. Ruinous competition among themselves, brought about by lack of production control, high taxes, starvation wages, sun-to-sun working hours, no semblance of rules of fair trade practice, was the principal reason the industry was fast approaching bankruptcy with the consequent loss of faith in the future. A momentous step forward toward conservation was taken by the industry when it adopted the Lumber Code. This would have been true even without Article X in it.

Under the Code the lumber industry has assumed obligations that are tremendous, and it will take a long time to accomplish what it has set out to do. The industry has its hands more than full at the present time in coping with the innumerable problems the Code has brought up. Some of them are most serious, and if not properly solved will endanger the very life of the Code itself. All of us—in and out of the industry—must be patient. Real progress comes from evolution—not revolution—and the slogan "Make haste slowly" we should keep before us at all times. The way hundreds of men have traveled to hundreds of meetings and have spent weeks and months of their time in serious discussion and hard work assuredly augurs one thing—the Code shall succeed: where there's a will there's a way. With the success of the Code faith in the industry will be restored, and once this faith is revived we will see companies figuring every way possible to prolong and re-

store their raw material. Some will be able to do it; others will not. Time passes quickly, and before the lumber industry generally is on its feet it may be that many companies will find it impossible to continue their operations due to lack of raw material, even though the desire and incentive to continue are there. To prevent as far as possible the occurrence of situations of this kind should be one of the first purposes of Article X.

There are some lumbermen who fear that regulations promulgated under Article X will be an entering wedge for complete and confiscatory control of their properties by the public. There also are some conservationists who likewise fear that any regulations promulgated under this Article will not be effective, and that the forests will continue to be destructively exploited. These fears on both sides come from men of good judgment and it would be wisdom for those charged with the responsibility of developing regulations for Article X to heed these warnings. If they do, there are great possibilities for good to come out of Article X—good for both the industry and the public alike. Anyone who attended the October conservation meeting in Washington knows not only this—but also that both the industry's representatives and the public's representatives at the conference were unusually close together in their opinions as to how Article X should be put to work to bring this good about. All of those charged with the above responsibility should remember, however, that even though they know a thing is right and should be done, getting it done by others is a different matter. It would be far from good business to place in effect in any district a regulation which did not have the wholehearted support of both the public and the industry in that district. This does not mean 100 per cent support by the industry—for there will always be "the famous 10 per cent." It does mean, however, a good

majority. Real progress will be achieved much more rapidly by sincere coöperation than by reluctant conformance.

The keynote in developing Article X should be coöperation. Impatient as some of us may be to see sustained-yield operations widely spread over the country, any conservation program is headed for a real collapse if the industry and the public are not first convinced that both will profit by any rules and regulations that may be promulgated under Article X. This Article bids fair eventually to become a code in itself. We should grow into it, building soundly as we go, and consolidating our gains before again stepping ahead.

It seems to me that the right way to make effective progress is to establish a strong conservation committee in each Divisional Code Authority. These committees should be composed of both small and large operators, and should have public and technical representation on them. There should also be a central committee composed of the chairmen of the divisional committees and public and technical representatives. It should be the duty of the Lumber Code Authority to see that these committees function effectively. Under the guidance of the Lumber Code Authority, this central committee and the divisional committees will have a continuous and ever-expanding job. Education of both the industry and the public will play a large part in the success of the work of these committees. As this education progresses it will be possible for local and national regulations to be issued with real expectation that they will be adhered to.

It may seem to some that this will entail too much delay and that progress will be slow, but I believe just the reverse will be true. Wholehearted coöperation on the part of the industry and the public will come only with a thorough understanding of the problem, and with this coöperation progress will be rapid.

There are many things these committees can do right away, some of which are the promulgation of:

- (1) Reasonable rules for leaving logged-off land in a productive state,
- (2) More effective fire protection regulations,
- (3) Regulations for salvaging burned and insect-killed timber, and
- (4) Rules to encourage selective logging and sustained yield operations.

At the meetings in Washington in October it was clearly pointed out by many persons that federal, state and public support will be required before many regulations can be placed in effect. Someone must make it his business to keep in behind recommendations of this kind which undoubtedly will be made in the final report of the Conservation Conference. This work can best be handled through the central committee and the divisional committees. I will not go into detail or discuss the many fine suggestions that have already been made, other than to stress the point that it is essential that some machinery be set up to place as many of them in operation at as early date as possible.

In the development of Article X the industry should, and will, lead. This leadership must be active and intelligent.

The success of the venture depends primarily upon the industry, federal and local government, and the public understanding the problem and realizing that any steps that are taken will react to the benefit of all. If Article X is handled in this way I, as a member of the industry, have high hope of the ultimate benefits that will flow from it. It not only will mean a vast increase in national wealth, but it will mean dollars and cents to the industry, and by industry is meant not only the owners—but their fellow-employees and all who are dependent upon forest products for a livelihood. Forest land will no longer become barren and nonproductive, with the consequent loss of permanent communities, payrolls and rail tonnage, and all the attendant evils such as erosion, floods, and the extinction of wildlife. This is a high goal to strive for. It is, of course, the foresters' and conservationists' dream, and if I may be permitted to say so—it is the dream of more lumbermen than the general public might imagine. Although it is not impossible of ultimate attainment, it is visionary. Without vision, however, no real progress is ever made. Let us not expect too much in too short a time. The important point is that with the Code we are facing forward and climbing toward the goal.

THE LUMBER CODE AND CONSERVATION

By ROBERT B. GOODMAN

Chairman, Wisconsin Conservation Commission

AMONG the objectives of the Lumber Code set forth in Article I is the maintenance of a reasonable balance between the production and consumption of lumber and timber products. The method of maintaining this balance is provided in Article VIII—Control of Production. This control has been in complete and effective operation since

September, and production is being limited in the various regions to quotas of 45 per cent to 60 per cent of the average of the three highest years since 1924.

This control is quantitative by species and not otherwise selective in character. The return of industrial activity will tend to increase the percentages of the regional quotas, as this article imposes upon the

Code Authority the responsibility of providing adequate supplies of lumber and timber products for the consuming market. The industry's control of production is therefore limited to the prevention of accumulations of surplus stocks and is without other conservation significance.

CONTROL OF TIMBER CUTTING

In Article I of the Code, there is also the declared objective of conserving forest resources and bringing about the sustained production thereof. The method of accomplishment is presented in Article X of the Code which distinguishes this responsibility from all of the other Code objectives by making it conditional upon coöperation with public and other agencies. It was mandatory upon the applicant industry to request a conference with the Secretary of Agriculture and such state and other public agencies as he might designate.

CONFERENCE ON ARTICLE X

The first session of this conference was held in Washington October 24 to 26 between representatives of forest industries, the U. S. Forest Service and other federal agencies, and forest advisers. Formal proposals were presented by the industry and the Forest Service. President Granger of the Society of American Foresters presented the principles of forest policy adopted by this society in 1931 which are founded on the necessity for direct participation of the public in the protection, development and continuance of forests for the general welfare of the country.

The proposals made and their discussion, both in the general conference and at the committee meetings, I believe, were the most comprehensive, orderly and reasoned presentation of American forestry problems by private and public agencies that has ever occurred in this country. It is comparable in importance to the International Forestry Congress in Rome in 1926. The conference committee and

its chairman, Colonel Graves, are to be commended for this planning and procedure.

The proposals coming before the conference were divided into six national layers: (1) Forest practices; (2) Disposal and acquisition; (3) Taxation and loans; (4) Public coöperative expenditures; (5) Farm woodlands; (6) Salvaging damaged timber. Committees were appointed which met and voted on the respective proposals of the industry, of the Forest Service, and of individual conferees. These committees did not draw conclusions, but reported the vote taken on each proposal. The reports of these committees relating to the six sections of regulation and coöperation have gone to the divisions and subdivisions of the Lumber Code Authority. These regional agencies are now discussing the committee reports, and the forestry committees of these agencies are attempting to apply these proposals by vertical integration to their particular forest regions.

REGIONAL FORESTRY PROPOSALS

When the Washington conference reconvenes in January, the general principles developed by its six-ply, horizontal lamination will be cross-sectioned for each forest region. The conclusion is inevitable that woods practices and the character of state and federal coöperation involved in bringing about sustained forest production are national only in principle, but regional and sub-regional in application. A new and previously omitted element will appear in the regional reports. This is the responsibility of the state and local governments that have original jurisdiction and are charged with localized public interest.

REGIONAL DIVERSITY

The diversity of regional social and economic conditions and of distinct forest species is recognized by the divisions and subdivisions of the Lumber Code

Administration. There are specific administrative agencies for pine, fir, cypress, hemlock, redwood and hardwoods, and further subdivisions of these agencies by state groups. The jurisdiction of these agencies extends to actual logging operations and the regulation of woods practices.

A glance at the map of the forested areas of the United States indicates many aspects of the distinctly regional character of their social and economic environment. In conservation chronology, these forest regions are still more diverse. The Lake States are confronted with imminent timber exhaustion, a situation which the hardwood regions of the East and South are only now approaching. In New England the stage of timber exhaustion has past and an equilibrium between annual drain and growth is appearing. The Gulf States are approaching this equilibrium. The Inland Empire and the Pacific Coast are still concerned with the problems of a timber surplus. In each forest area there is a varying character of ownership and a different state forestry policy as to coöperation between the public and private timber owner.

These are differences that are impervious to national planning because they are inherent in local public finance, local economic conditions and physical variations of soil, climate, topography and forest species. No one fact of forestry is more clearly recognized today than the need of localized forestry solutions.

SUB-REGIONAL ADAPTATION (THE LAKE STATES)

Whatever national coöperation is involved, whatever regional planning is developed under Article X of the Lumber Code, the actual woods practices resulting therefrom must be adapted to the operations of the individual timber block.

The problems of this adaptation have been considered by two regional conferences held here in Milwaukee during the

present month. One was by the public agencies concerned with forestry in the Lake States, specifically the office of the U. S. Regional Forester, the conservation commissions of Michigan, Minnesota and Wisconsin, the research agencies of the three state universities, the Forest Products Laboratory and the Lake States Forest Experiment Station. Assistant Forester Kneipp was the chairman of this conference and many of you have received a copy of its report which I am filing with the proceedings of this meeting.

The second conference was the meeting of the regional Lumber Code Agency at which Mr. Ramsdell read the public agency report above referred to and explained its conclusions. Mr. Kneipp, Mr. Tinker, Mr. Garver and Mr. Wilson discussed the woods practices necessary in this region to meet the conservation objective in Article I of the Lumber Code.

Both of these conferences approved the proposals of the U. S. Forest Service (as differing from those of the industry) in regard to regional boards for determining the application of forestry rules governing woods practices. Both the discussion by the public agencies and the later discussion by private timber owners disclosed the necessity for determining under competent technical supervision the optimum reproduction objectives and appropriate plans of management for individual tracts. It was also apparent that in this region private forest land owners cannot be depended upon voluntarily to keep their land productive.

This region is confronted with the difficulty arising from minutely divided ownership and the short-lived interest of the average timber owner. Therefore the solutions proposed at these conferences involve the blocking of areas on which the remaining sawtimber is susceptible to sustained yield management and in which the timber owner is assured a competitive marketing of forest products to more

than one existing conversion plant. This is a project which I trust Mr. Ramsdell will explain in the discussion.

COÖPERATION

This regional management planning requires coöperation between the private owners and public agencies, including the Lumber Code Authority which is itself a public agency conducted by the forest industries, having public obligation as well as public authority. This coöperation is twofold. It includes, first, the development of management plans for woods practices appropriate to each specific logging operation, and second, the administrative enforcement of the requirements of these management plans. These practice requirements will develop the need for allocation of the obligations incurred as between the private owner, the state and local governments and the federal government, relating to forest taxation, fire prevention, and compensatory acquisition of those selectively logged areas that cannot be consolidated by the owner into a future operating block.

However, we are here concerned with the validity of these practices rather than the obligations that may be incurred in their compliance. Specifically, as foresters, we are primarily concerned with

satisfactory silvicultural provisions. These provisions are capable of broad statement as to objective; they are capable of more specific statement as to forest regions and forest species; but in actual practice within the forest itself, their application depends upon the guidance of the trained forester.

Chairman Dana: Mr. Goodman's talk shows you why we regard Mr. Goodman as one of the forestry group. Both of the previous speakers make it clear that the undertaking is primarily an industrial one but is one the successful accomplishment of which will depend largely on the technical forestry group represented here today.

The Chairman is introducing Mr. Russell Watson of the firm of Banzhaf and Watson, Forest Engineers, said in part, "This concern is pretty active in forestry matters. They are buying and operating forest lands in the Lake States and have had actual experience in applying the principles of forestry to their own land. Mr. Watson is a business man, as well as a forester. He is in a good position to discuss the Lumber Code as it affects the industry from the standpoint of the Forester."

COMMENTS

By RUSSELL WATSON

Banzhaf and Watson, Inc., Milwaukee, Wis.

AS foresters, in commercial work and in the business of growing forests and selling forest products therefrom, we obviously have an abiding interest in the perpetuation of the forests and forestry in our territory. Here lies the source of livelihood for Mr. Banzhaf, and me and our Company.

I speak, in the following discussion, only for our Lake States region, and mainly in Michigan, where we operate.

The lumbering code says that in logging we must *undertake*, in coöperation with the public, to conserve the forest resources and bring about sustained production of them.

The code is delightfully indefinite. The intentions are splendid but of little direct use.

The present vogue seems to be that by jinks if private companies will not practice forestry, then the government is going to make them. The phrase "crack down" is sometimes heard. I don't see how, as a matter of actual practice, this can be done very well.

Forestry is practiced with the axe and the saw, in the woods from daylight until dark, in fair weather and foul, and horny handed sons of toil, Finns and Ojibway Indians, Yankees and Habitaws, do the practicing. The work is hard, pay is by the piece, the men average scarcely \$1.75 a day. Piece cutters are independent contractors, responsible to themselves; they have been so declared by the State Supreme Court. They are not interested in the least in large splendid plans of forestry or economics. They are interested in making as much money as possible with as little work; and any program of forestry which involves a change of cutting methods, must consider at once the effect upon the woods laborers; and whether they will leave and go to a competitor who does not monkey with silviculture—and leave you at a time when you want piece cutters oh, so badly, to fill contracts and to get out timber before the spring break up comes.

Fred Olmsted was once forester for the Diamond Match Company, and he said that whereas he could get a swell plan of forest management approved by the president of the company in New York, it was another matter to get it put into practice by the actual operators in the mountains of Oregon or Idaho. If forestry were consummated in the office, the foresters, who are nothing if not evangelical, could rest—like Kipling's artist—and "faith they shall need it," could rest secure in the knowledge that all was well in the woods.

Can you police, or mark trees to be cut, for thousands of little jobbers, away out in the woods? What can you do with Jim Skibo who bought about eighty acres from George McCallum here (and paid about a thousand dollars cash for it, too), and is now logging it. Jim can scarcely talk English; he doesn't understand silviculture; he certainly wouldn't be able either to understand or to talk English if a government office hove in sight. Would the Detroit Mackinac and Marquette Land Company reduce the price of its timber stumpage by a third in order that Jim could cut on a selective logging basis? If the head of the land office recommended that, would the Board of Directors down in New York, who hunger and thirst after righteous dividends, agree with him?

Further, what forestry do you want Jim to practice? Just how should he cut, swamps and uplands? Should he cut the poorer trees and leave the better ones for future growth when he cannot easily sell even the better logs? Not Jim!

The NRA code sets a definite price on cutting pulpwood, ties, poles, etc. I am not aware that the price thus established considers any silvicultural cuttings or requirements, minimum or maximum.

Are not the foresters asking the woods operators to practice an untried form of silviculture? Are they not asking that paths be followed which are untrod? And remember, this is a venture in very large finance. The foresters are not asking for a picayunish proposition. Can anyone in this room now tell me with any fair semblance of truth based upon real valid data, what the results from different forms of silvicultural cuttings will be in ten years? Can anyone specifically advise me how fast the remaining forest will grow; how much damage I may expect from windfall or insects, or disease? We know that such forecasts can be made with some accuracy in some

of our northern hard woods, but even here our experience is admittedly exceedingly limited.

Are you planning on installing this forestry into the larger holdings only? The largest owners in the main are not operators—they sell to many operators. Such are the Northwestern R. R., General Motors, Oliver Mining Company, Cleveland Cliffs Mining Company (both operate and sell), Kewenaw Land Association, Ruggles Estates, Longyear, D. M. & M. Land Company, etc. If attempts were made to crack down on them, as large timber owners, I am sure that they would simply undergo a form of disintegration of holdings into smaller units, uncontrolled and uncontrollable.

Ted Tinker is seldom home as it is; if he has to install the practice of forestry into every little jobber he would *never* be home.

The whole timber ownership set-up in the Lake States was not designed for forestry practice. It was designed for rapid liquidation—the faster the liquidation, the more money was made. The game was to grab a big block of timber and whittle it down as fast as possible before carrying charges and taxes rendered the owner unconscious and gave his banks the jitters. That is the trouble now. To such an owner, in general, forestry, and all connected with it, is interesting and somewhat dangerous; in private, and in the main, it is just a pain in the neck. If the government attempts to pass the ball to such a one, he either doesn't know how to run, doesn't know where to run, doesn't want to run, and probably will not run; and he promptly winds up either by a futile sort of fumbling or, more likely, passes it back to the government or state, whilst the coach looks on disgusted and discouraged, biting his finger-nails in irritation.

The virgin forests, static as to net growth, are most easily handled by clear

cutting, and that pays the best too; and that is the way, in the main, the present virgin forests will be handled. However we may theorize about a partial cutting to get the virgin forest onto a net growing basis, the actual practice involves doing it, and it involves the removal of ultimate complete financial realization for a number of years. The owner looks down a long and dark avenue of years, lined with trees, behind which lurk many sinister figures labeled Fires, Windfall, Insects, Disease, Greedy Legislators, Taxing Officials, Declining Markets, Competition with the Government, and State Raised Stumpage. The owner sees these figures ready to pounce upon him with sharpened tomahawks. They may be bug-a-booish to be sure, but they are, none the less, very real and terrifying to the forest owner who plans on forestry and who scans the future.

It seems most unlikely, therefore, that the forest perpetuation can be induced onto the large owners of present virgin forests by any bulldozing or cajolery. The owner will not react, and will not scare. Our feeling is that forestry, in the form of partial cuttings, may be successfully introduced, on some tracts at least, by a governmental offer to purchase the residual forest at a fair price. In fact, I am sure that it would arouse a large amount of interest amongst the timberland owners, and the chances are that the government would have more applications for examinations than it could conveniently handle in many years. Yes, indeed. The line forms at the right, and don't crowd!

As foresters, engaged in building going forests, we would be pleased, of course, to see the government buy partially cut forests. It would set a market price on forestry; it would tend to keep alive markets for forest products, keep roads open and open new ones; keep taxes and fires down, and communities up. These are essential to our business because a

forestry business, like any business, cannot easily thrive in a wilderness. We want friends, neighbors, competitors.

But truthfully, as a matter of fact, just how much chance is there of the government buying these residual forests in any quantity, at prices most lumbermen would ask? And if the money were available, do you think that within the next five years the government will have funds for that purpose rather than for labor relief?

If the government wishes to make available long term loans, at low interest rates, for forestry purposes, with cheap fire insurance, it is likely some forestry would be induced.

Our feeling rather is: Consolidate and make strong the present public forest gains. Do not attempt to put over forestry everywhere before tomorrow morning, lest, like Stephen Leacock's knight, you mount your horse and ride furiously in all directions. Do not stretch the public purse too far; who knows, it might burst. Even Uncle Sam probably will not own all the railroads and all the forests and all the farms and all the homes—everywhere we find distress, and everywhere we find the folks who insist that the government step in and buy out the show, to the owners' vast relief.

Consider the great gains in forestry in this territory in the past ten years—especially the past five years. Be somewhat content. Beware lest the government fall into the same economic error that private holders have fallen into—namely, expansion beyond control. Do you not think that vox pop, now clamoring for relief, will clamor just as loudly for curtailment of taxes when times are good? And will not the axe fall with a sickening thud upon many a laudable governmental project, including forestry? In Michigan the legislature cut off the state forester's department, and the splendid state forests, with barely a tu-pence last spring, and difficult and bleak days were ahead

until the C.C.C. boys came to the rescue. The powerful Manufacturer's Association of Michigan two years ago voted to abolish the State Department of Conservation—Mr. Harder stopped the movement from becoming public, by quick action. Do you not think that all these things are likely to happen again? And many more? That the pendulum will swing heartily to the right after the swing to the left?

The trend, you say, is toward government ownership. It certainly seems to be, but nothing may be quite so dangerous to follow as trends when directed by American enthusiasm and push. The trend up to 1930 was rugged individualism and rampant capitalism. It rose to great heights, and now, seemingly, has fallen, and in its stead we have collectivism and government ownership or operation of everything imaginable. As Mr. Banzhaf says, the government does not now regulate business, but actually does the business of the country, and it would be fair to tack up a shingle on the Statue of Liberty reading as follows: "The United States of America. Uncle Sam, Proprietor. General Merchandise, Loans, Discounts, and Fine Liquors."

It is because, as private foresters, owning many thousands of acres of good growing forest, we are intensely interested in the continued and sustained ownership and operation of the public forests and forest protection, that we venture to suggest the above. If the public forest light goes out our candle is sure to flicker; we cannot live alone with much success. The protection of our investment and the sale of our products follows that of our neighbor.

Our suggestion is, put your house in apple pie order, plant your little trees by the millions while you have the money, build your fire lines, roads and towers, and show us how to protect and cut forests in a manner beyond cavil of any-

one. Let no present or future legislator be able truthfully to say that the foresters do not know their own business and they do not tend to their own business.

Secondly, we have thought of the fire protection systems as developed by state and federal forests in this locality as being pretty good. Now, one who should know, tells me that as a matter of fact they are pretty punk, especially the state services. Certainly we have had some bad fires; but we have also had some bad years. Certainly the fire situation is getting a lot better yearly. But if what my friend says is actually true, then surely it behooves the public forestry services to mind their own virtues before setting forth to preach.

To the end that the forests may be more adequately protected, we suggest that a specific levy be made for that purpose on the timber products sold. It may be considered possibly as a sales tax, collectable from the consignee of the products, to be handled by the state departments of conservation definitely for forest protection purposes. There might be some good human psychology out of this—the one who has to stand it might wish to get value received for it. We suggest 2 per cent of the stumpage value of the timber thus produced to be charged back to the shipper. This would get a couple hundred thousand a year in Michigan. It might be just enough to put across a fire protection system of some precision and certitude. It affects the individual shipper but little and it would fulfill the request that the forest owner coöperate with the public in conserving the forest resources.

Thirty years ago it was impossible to get private forestry going because the man-raised forest could not compete with the native woods raised at no cost. Such has been true, and still is true to some extent, but those days in our region are rapidly passing and will soon be gone

forever. Already in our Lake States a surprisingly large amount of our forest products came from second growth forests, or from forests which have been culled over at one time or another during the past fifty years, for special species. Mr. Bonifas, in Ann Arbor, two years ago said: "Each year I buy about 165,000 cords of pulpwood. Each year I wonder, 'Where is all that wood going to come from?' Each year I have to lock my doors two weeks after we post our prices, and go to Florida; otherwise they mob me. Where does it all come from? Who can say?—Little jobbers, farmers, everywhere."

This past fall many of the paper and pulp mills opened their lists for contracts for rough wood and then closed them in three days, the rush for contracts was so great; and this despite the fact that there is practically no shipping in from Canada now and many of the larger mill and timber owners are not operating.

Fifteen years ago Lower Michigan looked like a plucked goose; now three large paper mills get the bulk of their supplies from only a half a dozen counties in that territory, and apparently will do so forever. The forest grows up, and it is a big country. If the entire forest area in the Lake States were forested as the foresters dream—every acre producing its legitimate quota—it might be that the present complement of mills could not at all use up the growth. And under the New Deal, our planned economy, and limited expansion of industry, which is sure to come more or less, the unlimited development of forests would result as surely as could be in an over-production of forest products with depressed prices; and again would the foresters be hot on the trail of somebody.

But our own company does not figure that this is coming for some little time. We do figure that the days of private forestry are just now dawning. The days

when expensive railroads and heavy equipment and great initial investment were necessary and part and parcel of the lumbering operation, are about gone. Our own firm has about 250 men in the woods this winter, and we do not so much as own a cross cut saw. Most anybody nowadays can set himself up as an operator and a jobber. All he needs is a Chevi truck, a couple of the neighbor boys as piece makers, and somebody like ourselves to buy him some timber and meet his payroll, and he is set for the winter. The bulk of our men live at home, and drive to and from work every day. They work for us month in and month out, some of them actually enjoy trying out a little forest cutting. That is, they work for our jobbers who are operators for us. The days when the timber operator felt that he must pick the bones of the forest most awfully clean because he would never be back again after he pulled out his railroad and abandoned his camps, are about gone in our region. Ford, General Motors, and gas tax built highways, have fixed that by opening up the country, and fixed it for ever and ever.

The days of really first class fire protection are just dawning. Equipment is being bettered, wide, good highways are being built; The Lumber Code probably means a living price; taxes, especially in Michigan, are no longer a real hindrance to private forestry of any kind. The farmers, not the foresters with all their large plans, fixed that, and fixed it plenty. The tax is now only 15 mills, and it looks as though real estate tax might be abolished entirely.

The development of the public forests is also a prize element; they take the curse off the wilderness.

Starting now, private forestry must be built up. It cannot be imposed onto the existing set-up. It unquestionably will build up.

The man who owns the forests and who

does a little selective logging in the hardwoods and a little gentler cutting in the swamps, and who recognizes when he finishes cutting that he has a first class potential forest, is simply foolish as a business man if he does not hang on to it. Our own company now has some thousands of acres of forest which we bought, have cut over somewhat, have taken off enough timber to pay for the property and have a little revenue over besides, and these acres support a splendid growing forest which will be ready to cut again in a few years.

What we need at the present time is the knowledge of how to cut forests. A few real demonstration forests from five to fifteen years old would be of the utmost benefit.

Private forestry moves forward as a natural consequence, side by side, with satisfactory fire protection, taxes levied in proportion as the property should pay, demanding markets. It cannot be pushed ahead. If a timber famine is coming, if mills are going to cry for raw materials, it is the most obvious thing in the world that there will be a distinct effort by private capital to supply the need. If it does not come, if the sustained annual yield, resulting from our present more or less hit or miss system of forest land economics, is sufficient to supply our mills, then, certainly, we do not wish to push beyond.

A well balanced program of state, federal and private forestry is unquestionably essential to our economic well being; but I am a bit dubious that the time is now at hand when even the smartest of us can say just how it should be set up. In the meantime, I am rather of the opinion that it would be well not to rush forward too rapidly, to catch our breath, and take things a little easy, and take stock of just what our industrial needs are going to require of our forests and how they best can be met.

DISCUSSION

Mr. Goodman: Will the timber owner take everything off the land under the first section of the report or where he does not cut will he protect it from fire? If he cannot cut anything from it, at least he has not destroyed the productivity of the soil. In this community there are two and one-half million acres in county, state and national forests. Article X will provide for coöperation by private owners in fire protection with the state and preservation of young unmerchanted growth. I ask Watson what cajoleries it would take to put this into effect.

Mr. Watson: I believe it can be put across. They will not dispose of slash but so far as engaging in coöperation for fire protection and prevention the average operator does this now to a large extent. They do not want timber or camps burned up any more than anyone else does.

Mr. G. E. Marshall: I have been very much interested in Mr. Goodman's talk as representing the Northern Hardwood and Hemlock Association. It has fallen to my share to represent the Northern Pine Association of Minnesota. I have attended meetings in Washington, here in Milwaukee and in Minneapolis. I took in the Washington meeting on Section X of the Code. There were as many views expressed as there were representatives there. However, each one was honest, but there is a wide diversity of views. As far as Minnesota pine is concerned, this section of the Code is not in the picture. We cut out in ten years. We do not own the land, but own timber permits. It is up to our company to get their timber cut and their money back before the time limit expires. If not, the uncut timber reverts to the land owner and the company loses its interest in the permit. In developing codes for this region the local situation will have to be taken into

account. The lumber industry is willing to go just as far as it can and meet the public, but the public cannot expect them to go broke in doing so. The specific requirements for the pine region are very much as Goodman states, the leaving of young growth and good fire protection. Anything beyond that is confiscatory.

Mr. Russell Watson: I would suggest a sales tax to be dedicated definitely to fire protection. There is ample stumpage for this purpose in the north country. Most owners hold it for about \$10.00 per thousand, if good and well located. Suppose it runs 8,000 to the acre or \$80.00 worth of stumpage to the acre. Two per cent of that would be \$1.60. It would not be a heavy load for the operator to carry. It could be easily absorbed in the sale price ordinarily. Since the large number of small operators are selling their products to the larger mills, the tax could be easily collected. In Michigan they have a sales tax on other products and the machinery is already set up. I would like to hear something of the possibility of collecting a few thousand dollars in this manner for fire protection purposes.

Mr. E. W. Hartwell: International Lumber Co., Minneapolis. I would like to call Mr. Watson's attention to Item 13 in the conservation and reforestation cost provision of Section 9 of the Code. This specifies items that can be included in setting a minimum sale price. The cost of protection of timber and cut-over land, including fire protection, slash disposal necessary, etc. "(B) Additional cost when incurred under instruction from the authority may be included in such amounts as warranted by conditions to be specifically devoted to reforestation, conservation, etc." For some time I have been in favor of barring from practical applications the authority in Section 13 as it

relates to minimum prices. For a large company, owning both timber rights and fee land, the solution would be comparatively simple. Presumably, no effort has been made to require the expenditure of this money on every legal description so the fund could be extended over all lands controlled by a company. Consequently the income from Section 13 on timber-right timber could be expended on fee land probably. In that case, the company could afford to do more on fee land than the discussion indicates is possible. Then comes the problem of the small operator who owns 40 to 80 acres of timber and is selling his timber to a large operator. If the larger operator owns timber producing land himself and has advantage of the minimum production price he could add to the work on his own land. Otherwise, I do not see how money collected under this item 13 can go on to the land from the production made by the small operator. What solution of this feature of Section 13 could be provided?

Mr. Watzek: The cost per section price average does not pertain to a single operator. They do not bear on the profit at all; must fall below cost; the prices were averaged. The Southern Pine Association was getting \$27.80 for ceiling and \$22.00 for flooring. The difference was that the flooring did not have stumpage values. One minimum price was set on all items sold from an average log in the region. The price must be between the ceiling and the flooring. The final average placed in effect for the Southern Pine Association was \$25.75. The average operator was not getting even all his stumpage, let alone any profit. Very few operators in the South have included in the cost any reforestation expenses. They are provided in the Code because we felt as we went along and had these costs revised and cost of protection revised from time to time, there will be a growing

amount of money spent for reforestation. It does not amount to anything at the present time. It has not been covered in many reports because the operators are not expending any money for it, and there is no record to show the cost. Such costs would amount to a certain portion of the lumber price, but I do not think that anything like a definite amount should be set up for reforestation or conservation work and definitely added to selling prices.

Mr. Dana: I would like to refer to Watson's question concerning the levying of a tax to give money to the state for fire protection.

Mr. Goodman: We have in Wisconsin a law somewhat along this line. We levy on the whole property of the state for one-half of the cost of fire protection and then we levy on the county concerned the other half of the cost. The state half is reduced by the Clarke-McNary Act. We want to get that changed so we can get 50 per cent of our cost from the Clarke-McNary funds, 25 per cent from the state and 25 per cent from the local tax interest. I doubt if an attempt to assess individual timber areas would be successful. It would cost enormously to get the money in and would result in some people paying and others getting the benefit without paying. If there is one thing in a community which is a government function, it is fire protection. In Wisconsin we feel the timber is so valuable we want to give it special protection.

Mr. Dana: Would it be better to raise funds for fire protection through the regular channels rather than through a special assessment as suggested by Watson?

Are the measures recommended for fire protection and the leaving of young merchantable growth as far as we can expect the operator to reasonably grow at this time under Article X?

Mr. Kneipp: I do not know much about the Lake States for I have only been coming here for a few years. The thing that has impressed me has been the disappearance of one magnificent stand of timber after another and the failure of a reappearance of anything to take its place. This is not peculiar to the Lake States. The same thing occurs throughout a vast extent of territory. The iron hand provided by the code organization is right. This has been a very interesting discussion, but to me it has covered only one side. It is not a lot different from the talk heard here on December 2, at the Northern Hemlock and Hardwood Association meeting while I listened to one explanation after another of why these things could not be done. I have listened to the same this afternoon. I told the Association on December 2 that the public was not seeking alibis, but solutions and expected them from that group. Are these obstacles so impossible to overcome? We are proposing in this Lumber Code to give every lumberman a great many compensatory features. He has the right to organize denied him before. He has the right to control production, the right to recover reasonable returns. I wonder if this does not carry the obligation to contribute something at a slight sacrifice. This sacrifice is necessary and vital to public values. I have been a little disappointed that no one else has talked along this line. I had hoped that side would be brought out more fully than has been done this afternoon. A moderate degree of forest practice is not going to entail an extreme loss to operators.

Mr. Matthews, Michigan School of Forestry and Conservation: It seems to me we are looking too intently on Article X. The balance of the Code could be directed toward forestry. Excepting, of course, the lumberman present at the meeting today, I think the majority of

lumbermen of the country have felt that forestry meant good technique but bad business. They have never thought that the thing could be put across. They felt that they could not control production, but had to liquidate because of various economic costs. The Code does two things,—(1) you may organize and restrict production; (2) if you do not we will make you restrict production. There are two ways production can be restricted. You can restrict laterally or vertically. You can cut the timber down to the ground to restrict laterally or set diameter limits somewhere. The work the U. S. Forest Service is doing in analyzing selective logging in certain parts of the country is largely a laboratory experiment on a factory-wide scale for the lumber industry of the country. When you propose changes in technique to members of other industries such changes usually lend themselves to laboratory experiments. Timber owners have not been able to run laboratory experiments. They are in the hope of restricting because they have to. I do not think lumbermen are ignoring the possibility of restricting in a way they will find out from their own operations that foresters have been right and sustained yield is one way they can protect their interests.

Mr. M. J. Fox, President, Von Platen-Fox Company, Iron Mountain, Michigan: I have a man marking trees and doing it scientifically. I do not think any of the lumbermen doubt the wisdom of some kind of selective logging. Why and where is another question. I look at this group as lumber salesmen. All are interested in lumber products and our future is somewhat dependent on the lumber market in one way or another. I feel that everyone of us is largely a salesman. We are all selling something, our personality, our brains or our ability. Certain features come into the picture. Anytime you get a commodity too high, right away you

invite substitutes. We are NRA one hundred per cent. Without it we could never have come out of our troubles financially. I do not know what your experience in operating has been. Our experience for the last four years is that high grade lumber did not go. Here is sales resistance, requiring sales talk which foresters can help put across. The principal trouble of the country is that we can make too much, we are too efficient. Henry Ford definitely stated recently that he will not use any more lumber in his cars. He will put his lumber on the market. We are all lumber minded and forest minded or we would not be here.

Mr. Allison, Minnesota Forest School: I have one question relative to selective logging. I just wonder if selective logging could be practiced by everybody would it not bring about the production of a much larger proportion of the upper grades and smaller proportion of lower grades and bring about a reduction of prices for the upper grades and perhaps a corresponding increase of prices for lower grades. I feel that that is a real possibility with reference to selective logging and if selective logging for everybody were put into force that is a question which might have to be faced. Perhaps some of these real lumbermen involved in producing lumber could give us some light on that phase of selective logging.

Mr. Fox: Every log has a top and butt. The larger logs are always defective—mature timber about 50 per cent. The really high grade lumber is a very small percentage. When I look at it I think of it in this way. We are all stockholders in that timber. Our enterprise is to harvest it. A large number of people advocate government ownership of the forests. I do not think we want the government to get into any more business than they have to. There is some merit in the government taking over the selectively

logged land on some basis—say 12, 14 or 16 inches,—if not the federal government, the state, because the people have had their labor, the railroads their tonnage, the industry its products, and still there is a good residue of growing timber.

Thousands of acres of land are being devastated. I agree with Mr. Watson that fire is the key to the whole thing. If we had kept fires out of the forests we would have more timber now than we would know what to do with. Our plan can be improved. The federal government has shown us how to fight fires effectively in Michigan. Our future record is going to be less black.

Mr. Garver, U. S. Forest Products Laboratory, Madison, Wisconsin: Under the Code, minimum prices will be set up and will be the weighted values on percentage of grade which the stands will produce. They will reduce your increased prices to compensate and you will have minimum prices just the same. Mr. Fox's question is a good one. Lumbermen generally feel that they can make money on number one common. This seems to be true in the Lake States. At present there is no market for higher grade lumber. This does not mean that we should set out to raise all common lumber. It is in common lumber that we are getting the greatest competition from substitutes. Looking ahead a number of years, we are hoping for a better market for higher grade lumber and for lower grade more competition with substitutes.

In response to Mr. Goodman's question. If you get into the dimension stock, ties, poles, etc., the products and the returns vary accordingly. I would like to ask Mr. Goodman if, under the Code cutting rules, it be the plan to prohibit the cutting of the small trees for dimension stock or acid wood, after cutting the larger trees for ties or saw timber would it be permissible to take

what small growing stock might be left for a by-product?

Mr. Goodman: Selective logging is only a regulation when you say you are cutting to a certain diameter limit. True selective logging is a species of modified cutting, and with the general provisions as to percentage, it is necessary in certain tracts to take out some very small trees. Under our selective logging we find it profitable to leave good trees above certain diameter limits for growing veneer logs. We cut smaller than the diameter limits where a tree is interfering with thrifty trees around it. When we come into the actual practice of selective logging, we cannot insist on a fixed diameter. A forester in the field in a particular timber tract would size the situation up and give instructions to the marker who takes a lot of things into consideration besides the diameter.

Mr. Garver: If we have control of the cutting, the Regional Forestry Board would have its Forester examine that particular area and say no, we could not cut any more, it would destroy everything left if some more were taken out.

Mr. W. F. Ramsdell, George Willis Pack Professor of Forest Land Management, University of Michigan: Mr. Goodman mailed me a copy of his very excellent paper, "The Lumber Code and Conservation," some time ago and my discussion notes were prepared for this paper. In his most effective informal presentation Mr. Goodman has covered practically all the ground of the typed paper and with his permission I will at the proper time briefly state and then comment upon one rather important point not included in his oral statement.

I should also state at the outset my discussion notes were prepared to cover this topic as given in full when the program was first issued: "The Lumber Code and Conservation. What is the likelihood that this code will bring about private

forestry, or at least keep private lands productive without public regulation?" If there is no objection my discussion will also cover this question of public regulation.

There appear to be four particular parts or highlights of Mr. Goodman's paper which command our attention:

1. Mr. Goodman points out that the undertaking of the industry to bring about the general objective of the Code of Fair Competition for the Lumber and Timber Products Industries is qualified by Article X of the Code. Article X introduces the assumption that the industries in this field can function only in coöperation with the appropriate state and federal authorities. In this respect it is different than the other codes and does not square with the statement made in behalf of the industries at the Washington conference on Article X, that: "This is an industry undertaking. It will be so administered." This is a very pertinent observation concerning which there must be general agreement.

2. Mr. Goodman states the conclusion is inevitable that forest practices and the character of state and federal coöperation involved are national only in principle but regional and sub-regional in application. In support of this conclusion that there must be a process of "vertical integration" of problems before successful application of the "horizontal" layers of national principles, there is presented the action of the recent conference of Lake States regional lumber code adherents, particularly in recommending adoption of the U. S. Forest Service proposals for regional boards with public representation as differing from the industry proposal for such boards with only the industry represented. Mr. Goodman here points out that this action of the conference amounts in effect to acceptance of public regulation.

3. As a natural corollary to the conclusion announced under statement number 2, Mr. Goodman gives us his judg-

ment that it will be necesary to develop plans of management for individual tracts, to provide competent technical supervision, and to prescribe optimum reproduction objectives. This is in direct contrast with the various proposals coming largely from the public representatives for blanket regional standards. I wish to heartily support Mr. Goodman's position in this matter as giving greatest promise of whole-hearted compliance and solid progress even though admittedly more complicated and difficult to prescribe than blanket regional provisions.

4. Mr. Goodman's typed paper contains the very interesting instructions of the Board of Directors of the Northern Hemlock and Hardwood Association, as code adherents, to its forestry committee for the preparation of the report of regional undertakings under Article X. The industry undertakings looking toward compliance with the forestry objectives of Article X are to be placed in three subdivisions in accordance with the specific public coöperation forthcoming—

(a) Those undertakings which are practical and enforceable without any public coöperation beyond reasonable fire protection.

(b) Those undertakings which are possible providing there is:

(1) Substantial relief of the tax burden on forest capital.

(2) Adequate fire protection with 50 per cent of the cost borne by the federal government, not more than 25 per cent by the local government units, and about 25 per cent by the respective state governments.

(3) Substantial progress in the reduction of local governmental expenditures through zoning of forest land and other measures of public coöperation.

(c) Those undertakings which will be feasible and enforceable in this region providing there are definite arrangements by the public agencies for the public purchase of forest areas selectively logged

in accordance with established forest regulations approved by such public agencies.

Nowhere does Mr. Goodman categorically answer the question as to the likelihood of the Code bringing about private forestry without public regulation. However, this question is answered in the negative by inference through the clear-cut assumption that public coöperation is essential to the successful application of Article X of the Code and that some measure of public regulation must accompany effective public coöperation. Here again I can find no point of appreciable disagreement with Mr. Goodman's apparent conclusions.

There is undoubtedly some question as to the probable success of the quid pro quo stand of the board of directors of the regional code adherents. Certainly both the national administration and the public is placing the industry on the defensive with respect to responsibility for continued forest denudation rather than the other way around. I believe, however, the stand taken by the industry is entirely logical from its own view-point for several reasons.

In the Lake States region, at least, the old accepted American lumber company set-up hasn't had a chance for financial success with a continuous production program over a considerable period of years unless bolstered up by increasing stumpage values. This is the set-up which normally involves the purchase or ownership of 10 to 20 or more years' supply of merchantable timber at the outset. The carrying charges on such a property normally outweigh the volume-grade increment of forest growth and force the private owner to rapid liquidation, i.e. rigid economic selective logging, which often approximates destructive logging and is so often accompanied by land abandonment as the best financial policy. Unfortunately, it seems that for this territory any of the old set-up merchantable

timber properties with saw logs as the principal product, which give promise of successful management for continuous production *under present average conditions* will return a greater net profit to the owner through destructive logging. This statement, no doubt, will be challenged in many quarters, but what we as foresters must produce is some "proof of the pudding," and this involves taking any likely operation all the way through with inclusion of *all* pertinent factors and over a series of years. To me it seems a shame that this situation has existed in general even if we could find some ideally situated property an exception to the rule. I do not think we can find much in the past to substantiate any other conclusions with respect to forestry practice than those which have been reached by the industry. Does not the real problem consist in bringing about a different set of conditions under which pronounced destructive logging is impossible, whether or not it be most profitable? I am optimistic that we shall make great progress toward these new basic conditions through application of the lumber code.

There is a strong psychological reason for assuming that no great forestry practice and sustained production progress will be made without public participation. Present owners and operators have grown up in, and are steeped in the old school of management and practice and by and large they will not change. This is notwithstanding the fact that conditions have changed and a new set-up for woods property and manufacturing plant is in order. In the first place it is actually a very difficult and sometimes impossible task to make this change when you have the old set-up in your hands. In the second place, as in other old established industries making radical changes to meet new conditions, it is usually young blood or new blood which leads the way—not the old timers. I think this is apt to be the case in the private timber production

and exploitation field without strong public pressure.

To me it has seemed clear for many years that because of the physical attributes of a forest property on the one hand, and the direct and vital effect of the manner of exploitation and management upon public interests, on the other, forest production through private enterprise is one of those business endeavors which demand some degree of public regulation and some degree of public co-operation if it is to succeed in a very large way.

To the extent that the obvious intent of Article X really means business I believe it must rely upon not only public but federal regulation. At this point we might just as well frankly recognize the conflict of interest between the public and the private owner which exists to widely varying degree. At one extreme we have the operator who continues forest denudation with subsequent low land productivity—bad for the public. At the other extreme is the possible imposition of regulations in the public interest which wipe out profits and virtually result in confiscation of private property—bad for the owner. In between we have what is apparently the intent of Article X, of some regulation of this privately owned natural resource in the public interest, together with the accompanying commitment of public coöperation. Stated in another manner, Article X appears to provide for an exchange of benefits to the mutual advantage of the public and the private owner, and Mr. Goodman shows that the industry in this region has logically placed this interpretation upon it.

From a good many sources we have had suggestions for the formation of co-operative timber production and operating corporations which would involve joint private-public participation as a promising means of attack on the private forest problem. Details vary as to just what might or should be furnished by

each party to the enterprise, but it is generally agreed that favorable credit facilities should be made available by the public and that public regulation of methods of cutting should be extended to the private lands. In his paper Mr. Goodman referred to the blocking of such areas for sustained yield management in this region. I will only say, in further explanation at this time, that in keeping with the exceptional leadership provided by the Forest Service in this region, a minimum of the old order exhortatory effort is being expended, and instead we expect to make available a working model of this method of solving the perplexing social-economic-silvicultural, private-public forestry impasse, for final machining at Washington. Article X surely prepares the way for progress along this line, though it is doubtful if the public acquisition phase will prove as successful a way out as the private owners apparently desire and believe.

To recapitulate briefly:

1. We assume that continued private timberland ownership is inevitable.
2. We assume the nation-wide application of some exploitation and management regulatory measures in the public interest. This is the foundation of the new conservation deal.
3. Whether everyone likes it or not, we may safely assume, through operation of Amendment 5 to the Constitution and otherwise, the private owners will secure benefits in return for any measures taken at their expense for the benefit of the public.
4. In approaching this problem of working out a program with social and economic, as well as silvicultural stability, we as professional foresters need skill and persistence in the public interest, but also a willingness to study without bias the problems of the industry, and a tolerance among ourselves which accepts progress that may not coincide perfectly with each individual's convictions. Mr.

Goodman has presented a very sane, logical and constructive paper as a starting point.

Mr. Garver: Of the country's total forest area, 25 per cent is federal and the other 75 per cent apparently something else. When Watson was half through his paper, I was much depressed; then by the time he had finished, I was not. Ramsdell depressed me again. I would like to mention a few things which I believe favor the successful practice of private forestry. First, we can assume, justifiably, that we are going to have some change in the tax system and improvement in fire protection. We used to think these were two obstacles which we couldn't overcome. Along comes the code and the lumbermen advance these two things as most important in carrying private timber land—practicing private forestry. Second, there is the provision for price control. Third, we have organized effort among lumbermen for a definite objective. They have assumed responsibility for Article X and are going forward with it. Those things we haven't had in the past. Furthermore, we have information on partial cutting, selective logging, which provide a starting point for practical measures of cutting which may, on the one hand, improve the stand and may on the other, obtain a higher return for what we take out. The two can be combined, as has been shown by studies and experiments by private operators. Often times there is more profit from selective cutting than by clear cutting. Some form of partial cutting is the most universal practice. Rules of forestry practice should be localized as much as possible. (Mr. Garver closed his remarks by expressing the conviction that the outlook for private forestry in America is much better now than it ever has been before.)

Mr. Ramsdell: First, I might state that I object to the implication in Garver's

statement that I am pessimistic. I follow the same reasoning all the way through. Under the new set-up we have a most optimistic future. We would make a tremendous mistake to think that unless we go through with the new set-up, we are not going to have any very large scale participation in private forestry. The factor of time alone decides whether you should take all profits which are in the timber out at the present time in order to get out from under the carrying charges. I believe I stated that rigid economic selection is the thing which has been the national cutting policy under the old set-up and that rigid economic selection, notwithstanding all the studies made of it, very frequently approximates destructive logging. A complete answer to that question can be given only by analyzing a specific property.

We have had such a study in the Lake States. It was carried on by the Lake States Forest Experiment Station in co-operation with the Madison Laboratory on lands that were at the time owned by the Cleveland Cliffs Iron Company, but are now part of the state forest. That company has been watching the selective logging studies and experiments but have not yet found it feasible to adopt the principle in their own operations. They have made the statement that they could not see their way clear to keeping their chemical plant supplied with wood if they should replace clear with selective cutting. They are, however, still interested and are hoping something can be worked out.

A timber holding company which sells stumpage would probably be more sympathetic toward selective logging than an operating company.

Mr. W. H. Kenety, Weyerhaeuser Interests, Cloquet, Minnesota: Article X of the Lumber and Timber Products Industries Code, deals with the conservation and management of private timber lands

and intimates that it will be necessary under this article, for the Secretary of Agriculture to recommend to the President, such necessary and feasible measures which will produce a sustained production of forest products and conserve the forests in such manner as will result in the greatest good to all concerned, the public included.

In line with Article X, there are several main factors which have to do with the conservation of timber resources and the perpetuation of forest growth, insofar as private agencies are concerned. These divisions are: (1) Fire protection, (2) forest taxation, (3) management cutting. In these projects, public coöperation is essential.

If we scrutinize the precedents which have been established for federal coöperative effort in other lines, we find certain established practices which can be used as a precedent in working out these main problems of fire protection, sustained yield, and taxation.

The federal government at the present time is strongly advocating and putting into practice, the use of federal funds for the building of public works, which in turn gives employment to many and is an important factor in the drive on depression. Many of these investments are for public buildings, which by no stretch of imagination can be termed self-liquidating. It seems to us that the expenditure of federal funds for the establishment of fire lines, telephone lines, lookout towers, and the many improvements which are necessary for adequate fire protection of forest land, offers a use for these federal funds, which should be self-liquidating.

Up to this time, federal funds for the purposes outlined above have been confined very largely to national forests, or to coöperative effort with various states. If the funds were now used to augment the protection of private forest lands, two

birds could be killed with one stone. The improvements would offer a large amount of work for idle men—would help out the communities, and these improvements would directly benefit the public good by conserving the natural resources of timber and allied wood products, which now are subject to devastating fires every year.

A precedent has been established by loans on agricultural lands, payment for these loans being secured by a mortgage on the land involved, the interest being at a very low rate, and the period of payment extending over as long a time as forty years.

One of the big obstacles in the handling of private lands for forestry purposes, has been the tax burden which must be paid every year, while the product which is taxed, does not mature for many years. Consequently, there is no cash return on the taxable property, with which to pay the taxes. U. S. Forest Service officials have gone on record unqualifiedly in stating that the expenditures for C.C.C. camps and forest improvement will be liquidated in most cases, within 25 to 30 years. The average private timber holder cannot afford to put money into these kinds of improvements and wait 25 years or more before he can reap any returns from this expenditure. The thought occurs to us that possibly the government should stand the cost of any improvements which would result from endeavors along the lines indicated in Article X, by loans secured by a mortgage upon the timber units in which these improvements were made, and the time of this loan to run until the self liquidating features had matured or taken place.

It is logical to assume that if the procedures which are now being used in the national forests are self liquidating, and the calibre of the men running the U. S. Forest Service, is such that their judgment can be relied upon, the safety of

such expenditures for private lands should be amply provided for.

In line with this, the Forest Service estimates that $2\frac{1}{2}\%$ an acre yearly, will take care of any ordinary fire protection area. The private individual should be asked to pay, say one-half of this yearly, and one-half of it should be borne by the government with the security of the timber on the tract set up as collateral; the government would be paid back when the timber became merchantable or was cut.

In the same way, I believe that the private individuals should be asked to pay a certain small tax on each acre per year, so that he would have an intimate interest in the tract involved, and that the rest of the tax be borne by the federal government until the timber on this tract matured, or was cut, with the security of a mortgage on this area, to compel the return of this money to the government at the time the tract was cut. This would be in line with the present practice of loaning money on farms and would enable private individuals or corporations to carry their timber lands until funds were received from the sale of the products from the area in question.

Obviously, the welfare of the state and the community is tied up with the industries which draw their raw material from the forest regions in which they are located. The importance of these industries, with their pay-rolls, employees homes, investments, stores, etc., which go to make up an industrial community, is manifestly so important from a taxation standpoint, or from the welfare of the state or community in which they are located, that this investment of federal funds would be productive of more good than all of the monuments the government could build, in the form of post offices or public buildings, no matter how numerous they might be.

If industries can keep going and pay taxes and the employees can work and

receive wages, and the community can tax the property of the employees and the industries on a fair basis, the investment of public funds in perpetuation private forestry is certainly legitimate. In other words, this is a safe investment and will bring back returns in two ways.

Under the present code no more than a fair profit will be permitted and many will make no profit. Obviously, any increased cost to a private operator or timber owner over and above the regular established cost, will penalize him severely. In the old days when large profits were sometimes made, it would be fair to demand that such an operator turn back some of these profits in the form of improvements and fire protection. Today, this is not the case, and if the public welfare is to be conserved, if woodworking industries are to live and support the communities in which they are located, it seems to us that it is absolutely necessary that the federal government carry, on some equitable, coöperative basis, burdens such as fire protection, taxes, and improvement costs, until these lands can again become productive with salable materials, with which to pay back the government for the federal funds which were used to carry these lands through their period of non-productiveness.

Dr. C. F. Korstian, Duke University Forest School: With reference to who is going to pay the bill or help pay the bill in connection with selective logging under the Code—that in some cases it may be more expensive to cut selectively. I happened to have the privilege of hearing a Vice-President and General Manager of a railroad give a paper before a meeting of the North Carolina Forestry Association in 1927, which would be a credit to a professional forester. He discussed the application of selective logging in southern pine operations. When he got through he was cross-examined. I remember particularly his answer to a

gentleman from Charleston, who said, "Mr. X, that is a very interesting discussion. Sounds like a beautiful theory, but how can you make it pay? Mr. X replied, "We are practicing selective cutting because we are convinced as a result of some studies that we made in our woods and mill, that it does pay us better to take out only the larger trees. We leave the small ones in the woods for a second cutting." They practiced that in their own operation. Since then the studies have proved conclusively that this gentleman was correct in his preliminary studies. Many other cases prove the same. There is just one question that could be raised and that is, whether selective logging, so-called, is the correct silvicultural practice for our southern pine stands. We are not yet fully convinced as to the correct answer. However, until the final answer is obtainable, it is certainly better than nothing and better than clear cutting.

Mr. Goodman: The lumberman in this region is a good deal in the position that Mr. McCallum described. He is confused about the situation. I have a great deal of confidence in the talk Mr. Garver made. He failed, however, in his analysis of selective logging gains to take into consideration the possible disposal of smaller sized timbers for other than lumber, and I know that is particularly true of the attitude of the Cleveland Cliffs Iron Company, which finds hardwood timber merchantable down to 3 inches in diameter. There is another problem confusing the issue and that is the silvicultural problem involved in selective logging. If 60 or 70 per cent of the merchantable stand in a good many of our forests is taken it would leave the remaining stand so open to exposure that instead of getting a good reproduction, we would get a situation like I have been told is found in some of the Ford cuttings where only 10 to 15 per cent of the

merchantable timber was left. The openings were so large that the remaining timber has since entirely broken down. A good many of our practical foresters or logging forest operators believe that, unless you go to the other extreme and leave more than 50 per cent, you might just as well take all, 100 per cent. There is another feature of the action taken by our agency or by the association and that is this—I think I can describe it better in language used by Mr. Tinker and Mr. Kneipp in the talks they gave. One timber owner said after the meeting, "Those men wore a velvet glove. They made it appear very feasible and very interesting, and we are interested, but we feel that, not these men themselves, but this whole company has underneath this velvet glove an iron hand of necessity." We can't escape the necessity of solving this problem. We see hundreds of thousands of barren acres left by successive forest fires, reproducing nothing but weed species, few examples of thrifty growing timber left by selective logging, and there is no doubt in anybody's mind what the public interest is in regard to this. Also something was said about our not referring in one of these Milwaukee conferences to the question of public loans. If this enterprise of growing timber could be placed upon a sound financial basis it would attract capital. A misconception

about borrowing money from the government is that it can be got at a very low rate of interest. When you borrow money from the bank, you have to pay 5, 5½ or 6 per cent. All public loans I have had anything to do with in the state of Wisconsin, have been around those same rates and not down to 2½ or 3 per cent rate. Another thing to mention is the statement of forest principles adopted by this Society in 1931. The basis of those principles, as I remember, was this—you stress the necessity of public participation in the protection development and continuance of the forests for the welfare of the country. I thoroughly believe that public participation is here and private owners have to meet it.

Some form of selective logging—not as a regional requirement, but as a requirement for certain timber areas, will be hooked up with the necessity of compensating the private owner for his selectively logged operating costs. If we can't get the benefit of future production, it is obvious that these costs should be compensated. In this region the government is acquiring timber land. The question is, should the government acquire the best first or the worst first. The past policy has been to take up the poor land. Now, is it not in order for the the Forest Service to acquire good reproductive land instead of land it has to plant.

MORNING SESSION, DECEMBER 29, 1933

SUBJECT: MAJOR PROPOSALS OF THE COPELAND REPORT

Chairman: Ralph S. Hosmer, Professor of Forestry, Cornell University.

Principal Speaker: Earle H. Clapp, In Charge of Research, U. S. Forest Service.

Discussion Leader: Aldo Leopold, Game Manager, University of Wisconsin.

Professor Hosmer: We are dealing today with the Copeland Report which is "A National Plan for American Forestry." I hope many here have read at least sec-

tions of the report. I hope that everybody has had a chance to read especially the admirable summary being distributed by the Forest Service. The Forest Serv-

ice deserves tremendous credit for bringing out this fundamentally great document—a program for American forestry. It outlines the way ahead. The report is backed by a lot of facts and statistics which have been secured from all available sources. The Forest Service deserves great credit for bringing out at this particular time the recommendations which they have. Whether you agree with all of the recommendations makes no differ-

ence. Difference of opinion will be brought out in the discussion this morning. It was a great thing for the Forest Service at this particular time of depression to make the far-reaching recommendations which they have. Great credit belongs to the Service and to the profession.

The report was the result of some 183 months of work in which a very large number of Forest Service men had a part.

MAJOR PROPOSALS OF THE COPELAND REPORT

By EARLE H. CLAPP

Assistant Forester, in Charge Branch of Research, U. S. Forest Service

IT WOULD be strange if the last few years had not caused great unrest among foresters. The period has been one of sweeping and increasingly rapid change. How far the changes will go, and when they will stop, no one can foresee. Men have been swept away from moorings which once seemed so secure and permanent they could never be disturbed. Old standards and objectives have gone by the board. Uncertainties, misgivings, and questions have arisen much faster than they could be answered.

A small group who were reviewing the forest situation in the fall of 1931 from the standpoint of the responsibilities of research organizations in general, and of the research organization of the Forest Service in particular, came to the conclusion that one imperative need was for an entirely fresh examination of the whole forestry situation in the United States as a basis for clarification and re-orientation.

The opportunity for this came out of a clear sky with the introduction, and the passage on March 12, 1932, of Senate Resolution 175, introduced by Senator Copeland. The resolution itself stressed such points as the existence of large areas of land suitable for the growing of tim-

ber, the fundamental and far-reaching benefits, economic and social, which would be afforded by the wise utilization of such lands under public control, and the desirability of developing immediately a coördinated federal and state program for the utilization of these lands. It then asked that the Secretary of Agriculture advise the Senate whether the federal government should aid the states in such a program. It also asked for the facts and reasons upon which the conclusion was based.

We who were made responsible for the report on the resolution construed the fundamental purpose to be the broadest and most searching examination of the entire American forest situation that we could possibly make under the limitations of time and personnel. We tried to obtain all of the available information and to supplement it as fully as possible with new information. We tried to throw away any and all preconceived opinions and conclusions, even so far as to re-examine the justification for forestry under present conditions. We tried to face realistically and in their full magnitude the problems which our facts should develop. We tried to recommend a specific, constructive, aggressive program as

to objectives, measures, and costs based on the facts as we found them. We tried to bring all agencies into this program in proportion to their responsibilities and their willingness and ability to meet them. We tried more completely than ever before, and perhaps for the first time, to formulate a national plan for American forestry on the basis of facts and conditions as they exist. You in the audience are in a better position than the authors of the report to judge whether we succeeded, and all of us can render a better judgment ten years hence.

For an understanding of the major proposals which grew out of the survey, brief reference is necessary to the most important findings. The finding which stands first in importance and significance by a large margin is that practically all of the major problems of American forestry center in or have grown out of private ownership. Although this may seem self-evident, I wish that there were time to dwell in a little detail on its justification.

The justification would have to include such things as the very high percentage of the devastated and poorly-stocked land in private ownership, the excessive percentage of current devastation and current forest deterioration on privately owned lands, the extent to which tax delinquency has resulted from the cut-out-and-get-out policy, the causes and the tragic economic and social results of transient forest industries, the large extent to which the balancing of the national timber budget now depends upon private ownership, the overwhelming extent to which the critical watershed problems of both the East and the West are the results of conditions on privately owned forest lands or agricultural lands which should be in forests, and the area of privately owned and abandoned agricultural land which can only be absorbed in forest production.

A second finding is that one of the

major problems of public ownership is that of unmanaged public lands. The public domain phase of this problem has long been recognized. The rapidly enlarging new public domain of tax delinquent lands in at least its present magnitude is relatively recent and little recognized.

The third major finding is that there has been a serious lack of balance in constructive efforts to solve the forest problem as between private and public ownership and between the relatively poor and relatively good land. To evaluate the results it is unnecessary to go very much beyond the fact that nearly 90 per cent of the constructive effort as measured by recent expenditures has been made by the federal and other public agencies; that two-thirds of this effort has been concentrated on publicly-owned lands; that publicly-owned lands suitable for timber growing constitute only one-fifth of the total in the United States, and the timber-growing capacity of these lands is probably less than 10 per cent of the total for the country; and finally, that public expenditures on private lands have actually exceeded private expenditures on the same lands.

In essence we have been making a trial on a very large scale of the relative effectiveness of public and private ownership, the latter with substantial but far from adequate public assistance. This trial has been under way for approximately two decades, but since the War, under a much more conscious and clear-cut recognition that it was a trial. If the survey under the Copeland Resolution means anything at all, it shows conclusively that in this trial private ownership has so far failed, and failed conspicuously.

Before outlining the major proposals of the Copeland report there is one more aspect of the forestry question on which I should like to dwell very briefly, and that is, what our purposes or objectives

should be, or what our plans or proposals should attempt to accomplish.

The first of these should, if possible, be to bring all our forest land into productive use.

The second should be to insure, if possible, supplies of timber and other forest products and of watershed protection and other services adequate to meet national requirements.

The ultimate objective is to obtain all the economic and social benefits which productive forest land and adequate timber and other products and services can bring.

It is becoming more and more clear that to meet such objectives as these, national planning is required. One of the reasons for this is that the laissez-faire policy of private ownership has not succeeded. Others are the long-time character of forestry, the magnitude and cost of the undertaking, and the impossibility of doing at once everything that is necessary. National planning is so essential that it could itself be classed as one of the major objectives.

If the major problems of American forestry center in or have grown out of private ownership, it follows almost as a matter of course that our major proposals must relate pointedly to their solution and deal with land now privately owned. It is a question of what should be done with the 400 million acres of commercial or timber growing land remaining in private hands out of a total of 500 million; of what should be done with the 50 or more million acres of land originally forest and already abandoned by agriculture, and the additional area which will or should be abandoned or taken over in the years to come. It is a question of what should be done with the 45 or 50 million acres of noncommercial or watershed protection forest land which private owners now claim.

The major proposals fall into two categories:

They are either to bring into public hands a larger share of lands now privately held, or

They must provide for measures that will keep private lands productive in their present ownership.

The Copeland report places chief emphasis and chief reliance on public ownership. It recommends the assumption of full public responsibility for

Slightly more than half of the commercial forest land;

Half of the timber growing job;

Five-sixths of the noncommercial forest land;

Three-fifths of the forest ranges;

Four-fifths of the area of major influence on watershed protection;

Eight-ninths of the areas to be set aside for forest recreation.

This means the public acquisition through tax delinquency, or exchange, or the acceptance of gifts, or purchase, of 224 million acres. The states should be encouraged to acquire all they will, but it is believed that this will not exceed about 40 per cent or 90 million acres. The remainder, or 134 million acres, will be the share of the federal government. The task is approximately to double federal holdings and to increase state holding more than five times. This is an adventure in public service large enough to challenge the interest of any administration, federal or state, and to challenge the ability and resourcefulness of the forestry profession. It is by far the biggest job the profession has yet attacked. It is proposed that this program be consummated in 20 years. It will be almost self-evident that unless the lands obtained are to be made productive and productive in the broadest sense of the word, public acquisition will be almost useless. Making them productive is in itself a great undertaking.

A large shift to public ownership seemed to those of us who formulated the recommendations of the Copeland report

the only assured way to carry out such activity programs as those recommended for the very conservative plan:

Of planting 25 million acres in the next 20 years,

Or to increase the area under intensive forestry at from 1 to 1½ million acres annually for the next 70 years,

Or to increase the area under extensive forestry by 2½ to 3¼ million acres annually over the same period,

Or to enlarge the area under protection by 191 million acres and to reduce the ratio of allowable to actual burn to the point where productive forestry is possible,

Or on 308 million acres of major and an additional 141 million of moderate forests influence to obtain fully satisfactory watershed protection,

Or to obtain satisfactory conditions on the minimum of 45 million acres which should be set aside for forest recreation.

Far beyond the assurance of satisfactory results, we believed that the ultimate net cost to the public under public ownership would probably be less than if the lands remained in private ownership.

Everyone concerned in this recommendation realizes that there is the opportunity for far-seeing statesmanship in carrying it out. We believe that the program can be consciously utilized to insure the economic and social well-being of entire communities and regions; that we need land planning of a high order in working out the relationship between agriculture and forestry and other forms of land use; that much depends upon the wisdom shown in determining the proper balance between areas to be acquired by the states and those by the federal government. We know that a vast amount of work which will call for the efforts of many different agencies over a good many years to come must be devoted to the planning and execution of this program.

Nearly a year has passed since this

recommendation was formulated. During that year events have moved farther than in a decade of ordinary times. My only present question about the recommendation is whether it goes far enough and whether the program of acquisition cannot and should not be speeded up.

Let no one, even with the consummation of the program of public acquisition outlined, minimize the obligation and the opportunity which remains to private ownership. Only slightly less than half of the area of our commercial or timber growing forest land will remain, and because of the higher productivity of this land the public will still be dependent upon private ownership and initiative and enterprise for half of the timber-growing job.

It is with this residual area of private ownership and with the additional area of land now privately held, which will sooner or later be transferred to public ownership, that the second group of major proposals must deal. Because of private opportunity and obligations and of public interest, both the owners and the public must participate in the efforts to keep these lands productive.

In the compilation of the Copeland report we had access to the greatest mass of data ever available on the practicability of private forestry. The concrete evidence that is piling up in practically all parts of the country is showing more and more conclusively the immediate financial advantage of leaving the forest in a productive condition by such means as partial cutting, as contrasted with current practices of most private owners. The financial advantage of the future is in the relative values of productive forests on the one hand, or wrecked forests or devastated forest land on the other. Here lies the opportunity. The obligation which goes with the holding of forest lands is probably being more and more generally recognized in public opinion.

Naturally, and as a minimum contribu-

tion to meet public obligations, provision had to be made in the Copeland report recommendations for an increased scale of aid to private owners in such forms as protection, advice, research, etc.

We did not believe that public regulation imposed from above and in the form most commonly advocated in years past would work out practically until a much larger percentage of owners were for it rather than against it. It seemed to most of us that the result might be merely another prohibition fiasco. Accordingly it was recommended that this form of regulation be held in reserve for possible future use if and when needed.

We did believe, however, that there was a far greater possibility of working out the quid pro quo arrangement which has figured less prominently in the discussions of the last 15 years than simon-pure regulation, and that an attempt to work out this plan was amply justified. Under it the private owner would keep his lands productive, and the public, where not contrary to the general interest, would allow such things as mergers, curtailment of output, larger association activities, and would grant or sponsor loans and furnish aid in other suitable ways.

It was our thought to attempt to work out this plan region by region and possibly class by class of owners, beginning where conditions seemed most favorable and progressing gradually toward the less favorable conditions.

We did not anticipate the National Recovery Act. When, however, press discussions indicated that such an act would be introduced, the Forest Service as a follow-up of the Copeland report quid pro quo proposal, and in order to afford a legal basis for working it out, recommended that provision be incorporated in the Act for the conservation of natural resources. The passage of this Act with a conservation provision has inevitably called for a country-wide effort for all

classes of forest land ownership, instead of gradual extension.

The conservation provisos of the forest industry codes under the Recovery Act are still in the making. As most of you know, the lumber code contains a far-reaching general commitment. Supplemental provisions which are to incorporate local forestry measures, are now being formulated in all the forest regions of the country. The pulp and paper codes contain general commitments but still lack specific incorporation of woods operations under the code provisions. The Naval Stores Marketing Agreement under the Agricultural Adjustment Act is still in a formative stage. Not much progress has been made in working out a satisfactory plan for farm woodlands.

Opinion among owners in the lumber industry varies all the way from full intention to carry out the code commitment in spirit and in fact to equally full intention to ignore it and regard it merely as a polite gesture.

Nothing can be gained by minimizing difficulties. The habit of thought which has obtained during the entire history of the American forest industries must be radically changed. Markets which no longer come unsought must, in part at least, be fought for in a highly competitive world, and this will be true even though a planned economy succeeds the laissez-faire economy under which we have so far lived. The difficulties are both economic and psychological, and it is an open question whether the psychological difficulties are not the more serious. And if we succeed in getting reasonably or fully satisfactory specifications on paper for the conservation of the forest resource and keeping forest lands productive, there will still remain the task of getting them applied on the ground.

In essence the conservation code provisions will be the beginning of a trial, on a nation-wide scale, of a plan which

affords another chance to private ownership to seize its opportunities and to redeem its responsibilities. If these provisos can be made successful, as every one of us hopes, a great advance will have been made in American forestry. If they do not succeed, some other plan will have to be found for the lands which remain in private hands. If they fail, much greater emphasis than ever before will necessarily be placed on public assumption of the task, and that public assumption will, in my judgment, have to go far beyond the recommendations of the Copeland report.

To sum up, the major proposals in the Copeland report have, therefore, to do with the disposition and handling of lands now in private ownership. They are based primarily on past trials and on national needs, both economic and social. On the strength of the exceedingly poor showing of private ownership, they emphasize for the next major effort a vastly greater assumption by the public of full responsibility for the forestry enterprise. But they would also try out another plan involving both private and public contribution for those lands which remain in private hands.

Beyond that, in this uncertain present-day world, when our entire economic

and political and social structure is in flux, and when it seems most unlikely that things will remain as they are or that they will go back to what they were, the philosophy of the Copeland report is:

First, for the best planning and periodic or even continuous replanning of which we are capable, and planning based on the most authoritative facts we can obtain and with open, unprejudiced minds.

The philosophy is, second, for trial under the most resourceful aggressive efforts we can make, and whenever necessary for further trial of different plans. For another statement of this philosophy I would like to quote the last paragraph of the summary of the report:

"Any attempt at national planning must provide for the recognition of changing conditions. One of the essentials in forest land use is, therefore, periodic revision of national plans such as here recommended, perhaps as often as every decade. This will afford the opportunity to consider not only the then existing conditions, but also to take fully into account the more and more authoritative factual data which it has been possible to accumulate, and the more and more conclusive results shown by practical trials on a large scale of different systems for meeting national objectives."

DISCUSSION

Professor Hosmer: The discussion will be opened by Aldo Leopold of the University of Wisconsin.

Mr. Leopold: The outstanding question which the Copeland Report raises is whether the emphasis which it places on public forestry implies with it a tendency for the abandonment of the private forestry idea. The authors of the Copeland Report obviously had no such intent. Their own emphasis by no means is inclined toward expansion of public effort in forestry. Our discussions yesterday

afternoon and evening showed only too clearly what may have been the intent of the authors. The readers are construing the Copeland Report as a substitute for what has heretofore been the primary objective of the profession, namely, advancement of forestry on private land. I hope that will be one of the questions to be very freely discussed here this morning. I will give briefly my opinion which is this: Even if the full public program as described in the Copeland Report could be realized tomorrow,

we should still be falling far short of what to me might be called a satisfactory conservation program. I have three reasons for that opinion. First I will not try to discuss the economics of private forestry because I am not qualified in that field. Private forestry is either profitable or unprofitable, depending on the premise. Second, what may now, under our present concepts, appear as unsatisfactory returns from forest investment might in future years appear good. We have been living without realizing it in an expanding economy. Almost every possible investment has shared in not only an earned, but an unearned increment. We will reach the stage where unearned increments have to be lopped off—we will change our views of good and bad investments.

The third covers the aspects of the question of which I have personal knowledge. First, the public forest alone can accomplish satisfactorily only one out of the four functions of forestry. The first function is wood production. The product is a transportable product, therefore, the function of growing wood can be localized in public areas. The second function, we all agree, is watershed protection. Even foresters have deluded themselves very seriously as to how far a program of public areas can protect watersheds of the United States. The watershed function is of universal dispersion. The condition of the watershed is the product of the condition of every acre in that watershed. It is self-evident that public ownership can restore watersheds only to the extent it can acquire the area of a watershed. That is necessarily a limited area. Nevertheless, anyone who has lived in the West knows it is true that these watersheds are in such unsatisfactory condition that the irrigation reservoirs are silted up even before the ink on the bonds is dry. Many will be completely silted up by the time the bonds

mature. This is partly due to the fact that the public forests have incompletely protected that part of the watersheds which they cover and to the still more important fact that there is a large area of public domain and private land outside which, due to no protection at all, is getting worse and worse. There is no conceivable way in which public ownership alone can protect watersheds of the United States. Thirdly, we hear a great deal about public recreational areas and their function in the public forest. I want to protest that we cannot measure recreation like wood products. Public recreation areas necessarily imply distant and usually crowded areas. Recreational use is self-destructive when crowded upon limited areas. It is inconceivable that a national program for the beneficial use of leisure, concomitant with the machine age, can be realized by public areas alone. Privately owned country is still carrying the bulk of the public recreation and must continue to do so. A way must be found whereby recreational uses will be conserved on private as well as public land. And lastly, public ownership of land is no solution for the game and wild life problem. In this, foresters are still going badly astray. The reason is a biological one and very simple. It is the biological nature of these animals that they cannot be concentrated. The limit is the number per acre which an area can support. A huge acreage would be necessary for a production reasonably satisfactory to meet the existing public needs. In order to provide the present licensed hunters of Wisconsin ten or fifteen birds apiece it would be necessary to put the entire farming belt in the state under management; so the proposal to set aside public areas and provide on those areas hunting facilities for the great army of hunters is an impossibility.

Public ownership in full bloom would be only a lop-sided and a partial ful-

fillment of a conservation ideal. And the second reason on which emphasis is necessary is the fundamental necessity for conservation of private lands. We are not justified in assuming that we have changed our methods for encouraging private conservation. I want to point out that the background of that particular action has radically changed its nature in the last twelve months. We are not only confronted by the question of the practice of forestry on private lands. As an example I will take a farm district in eastern Wisconsin. It is the best agricultural and forest land in that region. In the summer of 1933 we had the A.A.A. in the tobacco field, rich land, plowing up one-third of the tobacco and giving the farmer a subsidy. This pushed the farm up the hill. Up the hill, however, we have the C.W.A. stating that the steep hillside now in pasture must be fenced and restored to woodland. The C.W.A. is building a fence, furnishing the fence posts, service, etc., pushing the farm downhill. The C.C.C. is in one of the gullies of the pasture which the C.W.A. is fencing up, building check dams in that gully to cure erosion caused by long cultivation of land that should be in forest. We have the P.W.A. on drainage work down by the river. We have the forest tax law by means of a subsidy pushing the woodlot down the hill compressing the farms into the bottom land. Up further north, we would have the subsistence homestead moving the settlers off the marginal parts of the farm. Lastly, we have the forest tax law, offering the farmer another subsidy for pushing his woodlot downhill. Place yourselves in year 1940 and look back on the "new deal." We have drawn a bunch of statutes which contain specifications for the cure of an ecological ailment and have said to the private land owner, "Comply with these specifications and we will give you a piece of candy." It is perfectly evident

that the specifications are not coördinated and that they have to be coördinated before they constitute sound practice. It is an utter impossibility to coördinate specifications within the statutes themselves. We have no maxim for passing laws that will accomplish forest aspects of conservation on a private farm. On the other hand, it is not impossible for a sufficiently skilled man to lay out what amounts to a readjustment of land uses so as to bring about a reasonable compliance with these more or less conflicting requirements. Heretofore forest policy has been an attempt to reconcile the ecological facts which lay under our eyes on the ground with the nature of a political institution. Reconcile the woodlot with our tax law, etc. It is not inconceivable in this era that that problem may be swept away and in the future we may have the question of rebuilding our political institutions to fit the ecological requirements of our land. This is not intended as a radical statement. Our political institutions were evolved at a time before our machines were powerful enough to destroy the country. They, therefore, contain nothing in the way of maxims for safeguarding the country from destruction. We evolve the geographical unit as proof against destruction. This is more true in central Europe than in most parts of the United States, particularly the semi-arid part of the United States and in the interior plains region. Is it, therefore, to be expected that in the long run we will automatically find our political institutions suitable for the conservation objectives? If a skilled man can paint the picture of readjusted land use reasonably satisfactory there must be a way to change our political structure to the point where the candy we now are offering to the public to back up our rigid statutes can be offered them to furnish the incentive for carrying out somebody's judgment as to what could be done

on that farm. We are not yet at the bottom of the question of conservation on private land and this is particularly true in forestry, road control, watershed protection, etc. It is now all one problem and the "new deal" has made it such.

The most important point of all is simply this. Do not let us make the mistake of assuming that the objectives of any kind of land use is confined to the end product of that use. Saw logs and pulpwood are not the sole object of forestry. If we could get to the bottom of the public mind in its conception of the forestry problem, the thing that motivates the thought that the situation in forestry is merely a means of meeting the wood requirement or a new means whereby an American Citizen can plow. Others of the Copeland Report readers know these things so well that they understand the author is suggesting it as an ascribed maxim to elude the ugly realities of private land use. It cannot be eluded. Every hillside proclaims these facts that the farmer cannot delegate responsibility for the decent use of his holding.

Mr. Blair Jackson: I would like to ask Mr. Clapp if the Copeland Report is now being used as a guide for the work which has been undertaken by the state, national and private forests in the last few months.

Mr. Clapp: A lot of the work that has been undertaken in the last few months is technical. For example, cultural operations in the C.C.C. camps. The Copeland Report would have to be even more bulky than it is to cover silviculture in all parts of the country. The Report is the best survey which we could make with the time and men at our disposal. The report uncovered conditions which we had known of in only a general way before, serious conditions which require effort and in some cases discovery of those conditions aided in the best location for our work. The larger aspects of the

Copeland Report are recommendations of policies both federal and state. I cannot tell to what extent it is influencing state policy. I imagine most of the state organizations have been so busy in emergency work of one kind or another that they may not have had as yet the opportunity they would like for formulation of policies to meet changed conditions. So far as federal policies are concerned, I hope the Copeland Report may be of a good deal of value in the formulation of policies which we will try to carry out in the next few years.

Mr. Blair: What action will be required, if any, in placing the general recommendations of this report in effect? Will it require congressional action or is it understood that it is to be used as a forest policy?

Mr. Clapp: Speaking for the federal government I should say that the recommendations could be carried out much more effectively if we supplemented existing legislation. We have given quite a good deal of consideration to this since the report was published and hope to give more in the near future. For the states also I imagine supplemental legislation may be necessary. A great many things recommended involve only increased appropriation, and could be carried a long ways under existing legislation.

Mr. Bernard Frank: I believe more intensive application of the zoning regulation along certain lines could bring about ecological conditions essential to a rounded conservation program.

Mr. Leopold: I am highly in favor and in fact, enthusiastic about the possibilities of zoning in the Lake States.

Mr. Frank: I have in mind the extension of the idea of urban zoning, not only restrictive, but constrictive. I am wondering if we applied the idea of urban zoning to rural areas would it not go a long ways.

Mr. Leopold: I heartily agree with you in the use of zoning in that broad sense. An area in eastern Wisconsin is being zoned. There is a lot of erosion country—rich farming country. A project is under way to take 100,000 acres of that farm land and completely re-organize the land use. Give the farmer a lump sum for the privilege of rebuilding his farm to suit conservation standards. Push the woodlot down the hill, pastures would be taken entirely off slopes and located where they belong. Gullies would be check-dammed. Field put on ridges and in fact utilize all devices of modern agriculture. Stream beds would be rebuilt to restore as nearly as possible their original condition. A game manager is on the job to put new cover into game crops. It is a visible evidence of what scientifically used country looks like. It should be a very powerful lever to convince land owners what conservation planning and zoning can do.

Mr. Hosmer: The Copeland Report provides for a tremendous increase in public ownership by federal and state government. This afternoon we will discuss some of the details of public forest acquisition, but this morning's questions are questions of policy only.

Mr. Hamilton, Perkinstown: I would like to know—I have not read the report—if it is not the purpose of the Copeland Report to give to the private owners an opportunity to see the practice of forestry. It is idealistic to have 100 per cent efficient practice in forest management, but the point is this: Is it not really a short time venture and the government taking the lead in the public acquisition of land. Is it not the policy in the public acquisition of land to demonstrate to the private owner and illustrate to him the good that can be obtained under the program, or sort of act as incentive.

Mr. Clapp: One of the incidental bene-

fits of public ownership is management in a broader sense than for growing timber alone. The whole broad field for forest lands that Mr. Leopold calls conservation I would call forestry. There was the feeling among those of us who prepared that report that the job should be done in the best interest of the general public and to do so a larger share should go into public ownership. We thought that the job would be better done by public acquisition of the land. This weighed more than the demonstration idea, although the demonstration value was not overlooked.

Professor Hosmer: The Forest Service hopes that much if not all of the 224,000,000 acres can be required by the federal government within a 20 year period.

Dr. Schmitz: I wish to raise a question concerning the program of public acquisition. Dr. Clapp mentioned the fact that the report contemplated an increased acquisition program by the states. Those of us who are connected with the states have waited a long time for any stimulation in state forestry. The point already made by Mr. Leopold is that there is some tendency for the private owner to say that the federal program will take care of the proposition. The same thing is true in regard to state activities. I am not so certain that there will not be a let-down on the part of states in the acquisition program. I feel strongly that it is about time the federal government held out for the states some money for state acquisition on a fifty fifty basis. I would like to hear Mr. Clapp's opinion concerning the soundness of this proposition, that is, that the federal government take steps to secure money for the states to use on a fifty fifty basis for acquisition.

Mr. Clapp: I can give you only my personal reaction on that—I can't speak for the Forest Service—but my personal reaction is against it. If the federal gov-

ernment began handing money over to the states for acquisition, the tendency would be for states to take on more jobs than they could carry through. Then there would be subsequent requests for help for bringing the forests into production, etc. After they became productive the returns would go, not to the public in general, but to the public in each particular state. And it wouldn't be surprising, if after the plan got under way, requests came from states not only for help in purchasing, and making the lands productive, but also for the transfer of existing national forests to the states, or in other words, the danger of breaking down the whole national forest system.

Mr. Kneipp: Last night I trespassed on Professor Herbert's paper, but I want to rise and make protest because this discussion is trespassing against my paper this afternoon. I have prepared to offer myself to the wolves as a sacrifice this afternoon, partly on that very subject.

Professor Hosmer: We will keep to the broad questions of policy, not matters really having to do with acquisition in detail.

Professor Nelson Brown: I think we will all agree that Mr. Clapp and his associates have done a pretty good job. We need more national forests and certainly more state forests, as suggested by Dr. Schmitz. I was going to ask Mr. Clapp, however, if his report wasn't a bit severe—wide-spread and sweeping in its criticism of the private land owner. Yesterday afternoon I was very much impressed with the fact that the lumbermen and the foresters are getting together. The lumberman is talking about sustained yield, forest management, etc., and the forester is talking about those same things, using the lumberman's terms. We are getting together on common ground. As Dr. Schmitz has told us, in Europe the lumberman is the forester and the

forester is the lumberman. More specifically, I wanted to inquire of Mr. Clapp if his report is not predicated on some theories that may be slightly misleading. It seems to me that that is the case. Of course it is a great defense—not that it needs any defense. I will try to illustrate my point. I think the report tells us that the average lumber production for the period of 5 years—taken as the assumed basis of consumption, from 1925 to 1930, was about 38,000,000,000 board feet. The average of those 5 years, which represented the peak production or consumption situation, has dropped in 1932, according to census figures, at least to about 10,000,000,000 board feet, or almost 25 per cent. Our figures on consumption of all forms of forest production is some 14,000,000,000 cubic feet, and our growth is about 8,000,000,000 feet. Now if our consumption has decreased 25 per cent, and we don't know about 1933 nor 1934, but assuming that it has dropped down 25 per cent of the normal, which really was a peak production or consumption period, isn't it possible that the variable which is consumption and production may drop below the fixed quotient, which is growth? Our growth continues substantially.

Coming back to the Copeland Report, I think the general tenor of the Report—and I may be mistaken—is to emphasize as its chief objective an increase of government ownership by some 244,000,000 acres, predicated on the theory that we need more wood. I think Mr. Leopold said the first objective of forestry was wood production, and I think that has been the essence of the forestry effort in this country. Aren't there some bright spots as well as some very dull and sordid-appearing things about our forestry situation? I will grant that the Copeland report is a great propaganda effort and has been very successful in convincing the lay reader in the direction

of expanded public ownership. We are in agreement that public ownership should be enlarged. But in looking over the situation—take New York, for example. In New York we cut about 25,000,000 board feet, according to census figures. New England, including New York and Pennsylvania, is already on a sustained yield management basis because we are growing a great deal more wood than we are consuming. Of course there are other variable factors to consider. We all know that there is a great consumption of wood products in the country and we know about where it is. Now in the North Carolina pine region, which we will say is from Virginia to Georgia, inclusive, assuming those four states are exhibiting rather similar forest conditions, and produce similar types of forest products, we know that the virgin timber from that area was eliminated substantially prior to the year 1900. It may have been wrecked and ruined by the private owner, but anyway it was cut over prior to 1900. I am wondering how many of you foresters have found when the peak of lumber production was from that important lumber-producing region. Was it in the time of the great lumber production era, which ceased as of 1909? Was it during the period of great production from our virgin timber from Michigan and Wisconsin, or was it after those forests were permitted to grow up, under a very haphazard system of forestry? Perhaps no intensive program dominated the forestry situation in those four states, and yet the peak production was not during the period of great lumber production in this country, nor during the period of the cutting of the virgin supplies; it wasn't until 1926 when the peak production of those four states was reached. Now I don't know that we can draw any sweeping conclusions from that, nor from the fact that we are cutting only a small part of our annual growth in

New York and New England. I for one am not willing to give up entirely the thought of private ownership and the conduct of forestry operation under private enterprise. It seems to me a good deal of our discussions recently have been devoted to more and more wood production. The agricultural economists woke up to the fact in 1924 that their production was excessive. Isn't it possible that we may be embarrassed by growing too much wood? Let's keep our eyes open—let's not be convinced that the condition that exists today is the truth.

I have rambled a lot in asking a simple little question.

Mr. Clapp: I think that the main point of your question is that of fairness. We tried to be fair. If we haven't been we should be sorry. We got the best facts that we could, and we tried to interpret them impartially.

In our discussion of private ownership as a whole—and all of us recognize the special cases of individual owners and individual companies that have pioneered in the forestry enterprise, and we take out hats off to them—there has been so much confusion of thought on where we stood that we thought it would be a very desirable thing to bring the facts out as clearly as we could, and we did it in the full knowledge that such statements might lead to criticism.

There is a distinction between conscious effort and what has happened without any effort. I think that the major results that have come out of private ownership, so far as timber growing is concerned, have come not from conscious action but because of the persistence of forests regardless of how they have been treated.

Mr. Brown: Don't you think you have under-rated the forests in spite of that statement, and in spite of the fact that we have had severe over-cutting, let alone larger sizes? In spite of all this, we

have had a very positive and substantial growth.

Mr. Clapp: We got the best information we could, and we all recognize that there is a great need for strengthening our information. No one is more anxious than we are to see the information strengthened.

Mr. Hosmer: Even with the 224,000,000 there is still a good chunk of very good land that remains in private ownership which is a good deal bigger than the private owners are now developing.

Mr. Clapp: Even though this program of public acquisition is carried on there would still remain to private ownership nearly half of the timber-growing land in the United States and the growing of half of the timber which we believe will be necessary to meet our timber requirements in the future.

I want to go back again to forestry for timber growing only. Our present day forestry should be very much broader than that, and particularly public forestry. When you get right down to the basic thing what we are after is the social benefits from the land, and that takes in productive forestry.

Mr. Brown: Isn't that the main justification of your program, rather than this indictment of the private forest owner for his use of the land?

Mr. Clapp: Our main interest is constructive action for the future.

Mr. Ramsdell: I wonder if Mr. Clapp would tell us whether the 50 per cent of ownership left for private enterprise includes all of the farm wood-lot area, and if so, about what portion is made up of farm wood-lots.

Mr. Clapp: I don't recall the exact figures, but as I remember a part of the area now in wood lots would go into public ownership because it is mixed in with large timber holdings and it is in a forest country, but a substantial por-

tion of the forest land now in wood lots would remain in private ownership.

Mr. Ramsdell: Does that make up somewhere in the neighborhood of 25 per cent of the private ownership? Incidentally, it should be in the hands of the farmer and not the timber producer.

Mr. Clapp: I think it is somewhat less than half.

Mr. Hosmer: In further answer to Brown's question about the period 1925-1929 on which some of the figures were based, I will call on President Granger, who, as you know is in charge of the Forest Survey and is getting new figures. Perhaps he can clarify the point Mr. Brown raised.

Mr. Granger: In connection with the Forest Survey, one of its major aspects is in the determination of what our future requirements for forest products are likely to be, and we have made very strenuous effort to avoid creating the impression that we regard any figure as normal consumption. Dealing with that period of which you spoke, we took that as a period in which the country seemed to be in a condition of neither great prosperity nor marked depression, and therefore there were no unusual factors influencing the consumption of forest products. So far the purpose of determining what we might expect in the way of consumption of lumber in such a period they are worked out by a rather simple process of calculation to what might be considered the normal consumption of lumber, in 1930 something like 30 or 31 billion board feet. That is no basis on which to establish the normal lumber consumption, however. There is no such thing as normal consumption of lumber or any other forest product. Consumption of forest products is a result of a great many factors, and the same thing is true of a normal rainfall. There is an average, but no one can predict rainfall or lumber consumption based on past

experience. What we are seeking in this forest survey is a study of the factors which have influenced the consumption of forest products and what appear to be most likely to influence the consumption in the future. When we get through we are not going to make any hard and fast predictions. We are going to try to set before the public what are those factors which govern consumption.

If I may refer to the Copeland Report, it seems to me that it would be profitable to give point to some of the things which are directly affected by what I understood to be Mr. Clapp's statement of some of the major objectives of the report. I understood him to say that one objective is to keep all forest land productive. That, I think, is getting down to the point whether consideration not only of the need for wood but in addition of the larger social benefits will be a paying thing; whether or not it will be a paying thing to keep all forest lands productive.

One of the other major features of the program is a recommendation for the planting of 25,000,000 acres during a given period. Are we sure enough that the social benefits will justify putting that much public or private money into actual planting operations, considering what is now happening to our forest lands? I think that is certainly a proper subject for discussion.

There are things which are going to concern us in the very near future regarding carrying out the Copeland Report. It seems to me a big place has been left for private forestry, but it is still open whether the public should undertake to administer 50 per cent or 75 per cent, and particularly under the New Deal, when we are blessed with an Administration which sees things in the large. We have got to be ready with something coming from the foresters by which the efforts of such an Administration may be helped. My suggestion is, let us con-

sider some of these very large and important elements in the Copeland Report.

Mr. Hosmer: The suggestion of keeping to these broad issues is a good thing for this morning's meeting.

Mr. John F. Preston, Hammermill Paper Co., Erie, Pa.: I would like to raise a few questions at the risk of being misunderstood, and perhaps being classified as a forester not wholly appreciative of his responsibilities. I recognize the fact that the foresters should put up a program such as the Copeland Report; I recognize that it is the responsibility of the foresters to do that, and I am glad to see it. But that doesn't mean that the foresters should swallow it hook, line and sinker, and for my part I can't quite do that. I think that perhaps the action that the foresters have taken in railroading Article X into the Lumber Code may perhaps destroy something that we have gained rather than gain something else. Private land forestry is something which must pay its way, and we have all been taught that forestry which does not pay isn't worthwhile. We could concentrate on good fire protection and relieving the tax burden, and on an effort to bring about conditions which are favorable to private forestry, but as I see it, the action in Article X and the idea back of it seems to be to force forestry now all at once. I appreciate that forestry is needed, but it seems to me too much of a threat of punishment. We are not sure that we are going to succeed, and I am not at all sure that we are on the right track. I believe that we are right in saying that all forest land should be kept productive. I think everyone will agree to that. Beyond that I think it is our duty to bring about the conditions which are favorable to forestry and so far as getting sustained yield is concerned, etc., it is our job as foresters to show the forest owners that it pays, and when it does pay that situation will be remedied. But so

far as forest management is concerned, I think we can't expect too much in the future, any more than we have in the past, unless the economic situation changes. The Copeland report declares that we need $16\frac{1}{2}$ billion cubic feet of wood. I don't know whether that is true or not, and the authors of the Copeland Report admit that they don't know either. As far as I am concerned, I am not willing to subscribe to the $16\frac{1}{2}$ billion cubic feet or any other amount. I don't believe that we should have more public forests, on the basis of land use, recreation, watershed protection and other reasons which we have stated. To say that we need 224,000,000 acres more of national forest land because the country needs $16\frac{1}{2}$ billion cubic feet is wrong. Our story should be that all land should be kept productive and that we need more national forests for recreation, watershed protection, etc., and that we are going to encourage private forestry. Whether that will produce $16\frac{1}{2}$ billion cubic feet or more I think is immaterial. Who can tell what we will need. I think we are a little bit presumptuous when we use such a basis for a program and become dogmatic about it. That may be a little bit contrary to the general opinion, and I hope it is! I hope that I am wrong, but before I quit I am going to give you my impression of Article X. It is like the college professor that picked up a menu for fattening hogs and sent it out to the farmers, and one of the farmers came in to see him a few days later. He asked him how the menu worked out, and the farmer said, "Yes, Professor, the menu is very good. It is producing very good results. But couldn't you give me one that would fatten the hogs faster?" The professor said, yes, he could, only the trouble was that the hogs wouldn't eat it!

Mr. Hosmer: In other words, the proof of the pudding is in the eating.

Mr. Goodman: I want to speak on one of the points Mr. Granger brought out. I want to do it not under the guise of asking a question, but answering one. I want to answer the question—and it is right along with the suggestion Mr. Granger has made—as to the profitable subject for discussion. He was curious to know what the reaction would be of the lumber industry to the Copeland Report, and what it would be ten years from now, and I am going to tell him.

The title of the Copeland Report, "A Plan for American Forestry," is a little misleading because when we see a plan for something we think the problem is solved, and all we have to do is to follow that plan. The Copeland Report is really the element of American planning in that direction. That is the reaction that I got from reading it—that it was a compilation of the latest forestry data in the whole broad field of multiple-purpose forestry; that it was the basis for planning in every region, and it was accompanied with deductions and conclusions as to the part of the federal government in this planning. I think the Copeland Report is not only a wonderful compilation that will be an inspiration to state and regional forestry planning, but it is a report that had a most miraculous timeliness to connection with the obligations of the industry under the Code.

Now the question of controversy raised by the conclusions of the report as to private and public ownership will appeal to us as our inclinations lie in those directions. Nothing in the report is going to discourage private ownership. There are other factors that are discouraging private ownership, and the mere statement of those conditions in the Report doesn't add to the discouragement, but there is a mistaken idea on the part of the public which confuses private ownership as a system in forestry and the private owner

of timber. They are two very distinct things. The private owner of timber in a great many cases is in that position, not really from choice or the exercise of bad judgment, and the system of private ownership can be studied and either condemned or approved without any reflection on the individual private owner or on all private owners. The statement that Mr. Clapp made that the tax delinquency situation is a result of the cut-out and get-out policy of private ownership might be changed, because he is confusing a sequence of events. Tax delinquency followed the cut-out and get-out of private owners but it was taxation that was one of the principal causes of the cut-out and get-out policy.

Mr. Granger's point about production and consumption is the one thing that in my mind condemns the whole system of private ownership. The consumption of lumber per capita in the United States is just like what Mr. Granger said about the rainfall. It is an average. It is 90 feet in one state and 900 feet in another. It is nothing from one man and several million feet from another. Now I am speaking for the lumber industry and for the public's concern in the industry as an industry. We want to sustain the industry, to bring up the consumption of lumber to 1,000 feet per capita as an average. Those are the objectives of the lumber industry and the desire of the public in the interest of the public. To do that we have to subscribe to a forest policy whose objective is cheap production, whose objective is to produce so many forest products that they will be easily obtained and cheaper and therefore the support of a greater paper and pulpwood industry, a greater use of wood, and the only way you can make private forestry pay is in the operation at the expense of the industry itself, because to be successful as a private enterprise it must have as an objective a

higher price for the products that it produces. Now if we are having a long-time view of forestry to support the industry it is going to be dependent upon a cheap and plentiful supply of forest products, and that is the objective, as I see it, of public ownership. If that is to any extent true, it is impossible to say. We want private forestry—I am speaking now only of industrial private forestry—not of the former type but from the standpoint of recreation, etc. But if that situation is true there is no justification in asking the private industrial timber owner to grow timber as an enterprise by itself in competition with the public interest in growing a plentiful supply so that we can have a large and sustained forest products industry and large employment and cheap forest products in consumption.

Mr. Clapp: I would like to speak for just a moment on the point which Mr. Preston made, which is, I think, based on a misapprehension of our recommendation. We didn't recommend that the public acquire 224,000,000 solely to produce or help in producing some 16½ billion cubic feet of timber. We had in mind not only the growing of timber but the important function of watershed protection, wild life, recreation, and the whole category of uses and benefits, social and otherwise, that can come out of the forests, and it was the sum total of all things that we tried to take into account in arriving at those figures.

Now as to the question of objectives. It has come up in two or three questions here. We took the best facts we could get; some of them were fairly good and some of them much less satisfactory, and we made the best evaluation of them that we could and then we tried to set up objectives, recognizing the limitations of such objectives as well as the benefits. We thought that our own group, for example, would be able to carry on much

more effectively if we went on record for the best objectives that we could set up for the future, things toward which we are going to work. We recognize the desirability and necessity periodically for revising those objectives as new facts become available, as trials of new plans work out, and we see the results.

Now as to the question of full land use. That was stated as a desirable thing if it is possible to work it out. We didn't state that objective without qualification; it was desirable if possible to work out. It goes back again in the last analysis of the social benefits we are going to derive.

If I may go just a little farther on Mr. Goodman's question about the possibility of competition between private owners and the public in a program of this sort. I think he had made a valid point there. A private owner in the probable working out of this scheme would probably, however, have the advantage of the better land, and that is a big advantage. Then of course there is the commonly accepted belief that private effort is more efficient than public effort. For whatever truth there is in that the private owner has the advantage.

Mr. Watzek: You hear quite a bit of talk regarding national forests selling timber in competition with private owners. If we have half the land handled by the government and eventually the other half by private ownership, private industries handling that other half must stand on their own feet. Now will the government have to stand on its own feet, or will the public be taxed to grow this timber, regardless of whether it pays or not? I think that is something that is probably going to be the main objection by industry in the Copeland Report. Industry generally I think favors the Copeland Report along its general, broad lines, but with that one exception. I believe it is quite an important point because how can

industry plan for 50 years or longer if they think 50 years from now they will be up against a tremendous competition of cheap timber being sold off the national forests, and it is going to be a discouraging factor to private forestry.

Mr. W. L. Hall: The discussion has gone so far that many of the phases of it which I hoped would be covered have been covered, and it is not necessary for me to refer to them. I do want to pay my personal tribute to the men of the Forest Service for producing this work of elemental importance, and to Mr. Clapp personally, who led this investigation and led the work of bringing the results together. I think we should say that it is one of the finest pieces of work that has ever been done in this country on forestry, and we should be proud that our particular period of activity has brought out this report. I think, too, that there will be very little difference of opinion between us as to the report itself and its findings. I have studied it quite carefully and I have failed to observe any particular gaps in that report. I think the ground is pretty well covered, but I am glad that Mr. Clapp did bring out that the basis of facts on which the report rests is still not solid enough. There is a great deal yet to be desired and done to make anything like accurate predictions such as the report does make. Take for instance growth. Now I am convinced that no group has got figures on which to base the prediction that there are some 8 billion feet of growth in this country. We know that it is going on but we don't know definitely the amount. The chance for error of that kind is very large indeed, so I want to stress particularly what Mr. Clapp has already brought out; the fact that we must continually keep on improving our basis of facts and especially as we go forward now into the future. We must have a

much better basis of facts than we have now. If we were to be called upon to make a decision or come to a vote today as to whether we think the federal government has said the last word and should immediately proceed with the states to acquire 224,000,000 acres of public land, I should have to vote against it. As a final statement I could not accept it. Furthermore, I think we are not at a stage where it is possible to reach a safe conclusion expressed in that way. But I recognize that the report already is accomplishing a very excellent result, because you can't have a plan without setting up something as an objective; setting up some kind of an accomplishment, and that Mr. Clapp and his associates have done and I am willing to accept the 224,000,000 acres as a figure which spurs us on towards a right solution, but when we finally end up with the matter—and I don't suppose we ever shall—but in our time I doubt if we will see the federal government and states acquire that much land. Neither am I ready to say that private ownership has failed. I am rather inclined to say that the conditions for successful private ownership have never yet been introduced. I think we are nearing those conditions, and I think the happenings of the last 12 months are stimulating us greatly towards bringing about a set of conditions whereby the private timber land owners in much greater number and far greater acreage than before can achieve a real degree of success in forestry. I look forward to the two phases of the program going along together. Of course I subscribe to an increase in public ownership, but along with it I expect to see, as a major part of the whole program, a substantial movement in the direction of the introduction of forestry on private timber lands.

Mr. Allen: I want to add my tribute to those that have been given to the men

who prepared the Copeland Report. I was paid 5 cent a chapter to read the Bible, and I am getting paid for reading this report! There is one thought that has been chasing me for years, and I have had the temerity to suggest it on several occasions. It seems to me with the growing attention to the social service of forests in this country, we are approaching a time when the evaluation in cash of social services of forests must be made. There must be some system worked out, and it's a challenge to the research minds of the country to work out that system. It is not impossible, but at the present time we must take the incidental benefits of forestry and wipe them off the ledger because we have no way to put them in dollars and cents, and I believe someone who is bold must start out working up a system whereby the water-holding, the land-holding power of trees, the recreational value of a forest background, the enhanced value of taxable real estate because the scenery is improved—I believe the time is coming when that will have to be worked out in terms of cash. People collect damages for killed members of their families, and you can put that sort of thing in terms of dollars and cents.

I also want to put in a voice against the fear that we have that saw-logs are never to be needed again. I think it is a bad spectacle to see people rise in a meeting of foresters and worry because we may never have use for saw-logs.

Mr. Larson, Ames, Iowa: It seems that foresters are inclined to quibble about details, and it seems to me that we should go back to some of the essential facts that we learned the first year in forestry; that forests are a public wealth. Forests are essentially, intrinsically public wealth because they take in these other values that have been mentioned; watershed protection, recreation, and all those other factors, but private forestry does not

recognize any of those values and that is where we split with private forest owners. Private forestry is based on dollars and cents only; timbers are in the class of private wealth and forests in the class of public wealth. I favor the Copeland Report because it advocates acquiring more public forests and as private forestry falls down, as it has fallen down, because it only recognizes the money value of the crop, let us have more public forests. Some of you will think public forests are national forests. I think it would be a very stimulating thing if we got a report from Montana. We as a state have worked this out; we know how much agricultural land we have, we know how much state land we ought to own and how much land we can yield into the practice of private forestry. Wouldn't that be a very fine thing to have? We know how much national forestry we have in the state. Now when the states come to that situation, which I think will be a final solution of our American forestry problem, and step up and say "We want this land as our state forests; we want this to be privately owned and operated in the state and we want that land for national forests," wouldn't that be fine? That is the eventual final goal of our forestry. It doesn't matter what kind of forest it is. That is what I see will be the final solution of our problem. I don't say that we should permanently have national forests all over the country. We may have national forests now where we will not have them in the future, but let our national or state forests be demonstration areas by which we can stimulate interest and show the work to the private owners and get the private owners to recognize the full value of forestry. I should say, then, that I am squarely back of the acquisition of more publicly owned land for the reason that privately owned land has failed in practice. I think that we should,

as a profession, stop quibbling about these details of so many cubic feet per acre, and unite on some plan. It is not a plan, it is a policy. A "policy" says what we are going to do, and a plan says how we are going to go about it. The Copeland Report, then, is a policy.

Mr. Fox: There is one point that hasn't come up here, and I know it is in the Copeland report, and that is the government and the state live on forever, but the most of us are limited to about 50 years. You are talking about futures, your children, my children and grandchildren. That comes into this program. You take the average state lands; if they were any good they wouldn't belong to the state. Settlers have just let them go back.

We are figuring in terms of years, futures. I might leave this thought: Are we leaving the camping ground better than we found it? Are we good sportsmen, good neighbors, good foresters?

Now as to that other detail I wanted to bring out. You don't lose your stumpage. Let's put out the 25,000,000 acres that are being devastated by fires year after year. You men are key-men, everyone of you, to help save that tremendous loss. Mr. Leopold's talk was very interesting to me.

Mr. Hosmer: There is one point that Mr. Clapp made that we all know; in this proposal a major part of the acquisition would be federal and the other state, but the question is, how are the states to be worked up to do their part? I am going to call on Mr. Harris Collingwood, who has had much experience with the states, for a discussion of that issue. We all recognize that it requires money, and state appropriations, and just whose responsibility is it going to be? How are we going to work on the states?

Mr. Collingwood, Washington, D. C.: That is a matter that has been on my mind for a long time, and frankly I don't

see any immediate solution. I understood that while I was out a while ago the question was brought up by Mr. Schmitz and the suggestion was made that that be reserved until this afternoon. However, I think that Mr. Larson has put his finger on the key to the situation; that is, that this broad plan or policy, as you please to call it, of a national program for forestry must be broken down, decentralized into areas or regions which are capable of grasping the situation. When you present the facts of the Copeland Report to a group of laymen and speak in terms of 90,000,000 acres to be acquired by the states, and you speak in terms of the area burned, etc., it means nothing particularly to the business man in Michigan or Wisconsin; it is just a mass of figures. But if that can be brought down, as Mr. Larson specified, for the State of Montana, showing what is needed in that state, what are the gains to the state, what are the present gains and those to be expected, I think we will be getting somewhere.

Now, using the simile of Mr. Leopold, we have formed more or less the habit of getting things done in forestry by passing out a bit of candy for achievements. That is the basis on which the Clarke-McNary Act is being developed. It is a little candy to the private owner for fire protection, educational work, etc. It would seem with the leadership that we have here, with the key-men that there are here and all over the country that programs might be put up in each one of the several states to integrate, to prepare a state program of forestry and integrate it with the national program under the Copeland Report. Until that is done I don't believe the states are going to assume their responsibility. Personally, I would prefer to see it done wholly by the states, but that seems to be out

of the question, at least for any unified program.

I wonder if the men in the Forest Service have given any thought to ways and means of getting state programs going? Has that been a part of your consideration, or is that still too far in the offing, and would it be possible to put out a bit of candy through some federal appropriation, or perhaps through some of these unusual activities—C.W.A., and P.W.A., to get state programs worked out on a general basis, and the whole group integrated into one national program?

Mr. Hosmer: May I call on Professor Chapman. I think he is very familiar with state organizations. He may have an idea on the subject.

Mr. Chapman: As far as the state program goes, I have been more interested in developing possibilities of state programs because I thought the national program would take care of itself, with some momentum. We do need a lot of study on state programs. National forestry programs never solve the problems of the state. In the East it is primarily a question of financial ability after we have got the states converted to the need of it. Some states can and do take care of it because they have the tax base which permits them to take care of it and in others it is only through tax delinquent lands. States are going to get a lot of land, maybe not the land they want, but that is a very poor solution—solution by a breakdown of the present system of private ownership. I don't know whether it is possible to stimulate state acquisition by government funds. I doubt it, and I wouldn't want to advocate it. I agree with Mr. Clapp on that. National forests will probably be the larger, more important element of forestry for a long time to come. I hope that when things progress the states will do what the richer states have done and go into the

acquisition of public lands on a large scale.

Regarding the Copeland report, it seems to me that the boldness and courage which was shown by the authors of this report in stating definitely the importance of a public acquisition program is the most commendable feature of the whole report. It was by no means intended to discourage everything that may be done in private forestry, but anyone who has watched the progress of forestry, the constructive work in forestry and the failures in forestry, can trace real progress, largely due to public ownership, and there are many reasons for this. One of the most startling examples is in Minnesota, where, by a fortunate fluke, the Minnesota National Forest was obtained as long ago as 1902, and anyone who wants to know the difference between getting under way in forestry under public auspices, and what happens when opportunities are not taken advantage of at the right time, all they have to do is to see what happened in Minnesota and what they have there in the line of a tremendously valuable property.

Now I think there has been a great misapprehension—I have heard it expressed this morning—regarding the danger of competition between public and private production of timber. I can't see that. In fact, a tremendous bet has been overlooked completely. In order to maintain forests and forest production we must have a sufficient supply. Otherwise, your big industries will be driven out of wood and substitutes will take the field. There are countries like Sweden who furnish America with an enormous amount of their pulpwood. More than 80 per cent of their lands are privately owned and have been managed for forest production for six and seven hundred years. There isn't any danger there in Sweden of public competition. Unless a much larger area of our forests is made

to grow timber in the future, this argument about having too much timber in the future will devolve into such a scare it will disrupt our whole planning. In Australia the government put private forestry on the map by growing public timber. There is just as much and even more danger of a scarcity of stumpage as there is of a surplus. What we want is a balance. Have we properly analyzed the future far enough? We know that our surplus is the result of over-developed lumber industry rapidly liquidating a surplus stumpage supply. That vision has been shown in the Copeland Report. Any forester who thinks that he can talk intelligently in the future about any phase in forestry without first reading the report is very much mistaken. The profession will have to take that report as a starting point from now on. Let's get the facts that are there. Let's not do so much talking without facts.

Mr. Tinker: Just a word about state forests. In the Lake States Region I would feel that the national forest acquisition program were distinctly a failure if it didn't result in the establishment of state forests. That was one of the objectives that we had in mind in initiating the program, and it was the objective that led to the coining of the slogan, "The Worst First." It was our theory that it was good logic that the federal government should take over some of the worst first in order that the states might have some of the better chances for state forests.

A second and more important function that the federal acquisition program can and will serve in the Lake States is to lend political stability to the states' programs. I hope the very competition that is bound to result between two organizations striving for the same end will lend to popular support for the forestry programs of the states to such an extent that they will not be subject to political

expediency or political influence, so that the programs may be broad enough and may be carried on by technical men qualified to carry them on in the three Lake States. I am sure that the federal program will, in the long run, reach those two objectives that we had in mind when the national forest system in the Lake States was laid out.

Mr. Hosmer: We have still about 10 minutes left for discussion. Are there still other points?

Mr. Watzek: I would like to ask a question particularly along the lines brought up by Professor Chapman. The situation in Sweden is comparatively simple. There the government owns the same percentage of timber as we have here now. I wonder why the Copeland Report goes along a different track, making it one of the points that the government acquire approximately half, with the possibility of acquiring more eventually, when we have this fine example of Sweden, with far larger acreage of land in private ownership. I would like to have Mr. Clapp discuss that a little.

Mr. Hosmer: May I add one question to that raised by Mr. Watzek? I would like to know whether the N.R.A. Code, which has come since the Copeland Report was published, has any influence or makes any changes in the recommendations.

Mr. Clapp: I will make the answer to Mr. Watzek's question a little broader than Sweden, if I may. My recollection is that in European countries in general, where there is forestry, the percentage of publicly owned forests is larger than 20 per cent—I think it runs about a third, as a general average. This recommendation in the Copeland report was based partly on trials, so far, of public and of private ownership in the United States,

and public ownership so far has made the better showing for a combination of reasons. In Sweden and in a great many other countries, if you were to compare the results of public and private ownership, there wouldn't be the wide difference that you find in the United States. In other words, there wouldn't be the same need for public ownership. Private forestry in Europe is a long, historical development. It goes back in some instances to the holdings of the feudal barons, not for timber growing but for game; to entailed estates, to such things as the separation of land ownership and the manufacture of products, which is a very fundamental thing, all of which are absolutely different in Europe from what we have here in the United States.

As to your question, Mr. Hosmer, about the lumber code affecting our recommendations for public ownership, I would say that it does not, so far as present objectives are concerned. Ten years from now, if we look the situation over again and we have entirely different results to compare, it might not be necessary to go as far in public acquisition as we have recommended, or it might be necessary to go even further, but for the present I wouldn't change our recommendation.

Mr. Chapman: I should be perfectly satisfied if 20 per cent of the forests in the East were in public ownership. Seventy-five per cent of all the forests is in the East. To reach 20 per cent in the East we would have to increase the present publicly owned area several times. If a private owner has forest capital under management, and can continue with that situation he is in fine shape, but with tremendous areas deprived of all capital and required to be built up over a long period of time I would say we had to have double the public area.

WHITHER FORESTRY?¹

By ALFRED GASKILL

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This is an adversely critical review of the "National Plan for American Forestry." Its general tenor is to condemn rather bluntly the authors for attempting to draw too definite and too specific conclusions from too incomplete and too inaccurate data. It complains also that they have made erroneous or illogical deductions from such reliable data as does exist. It warns the profession to avoid the risk of discrediting itself and the forestry movement, through giving blind and unintelligent support to doctrines and policies not based on sound interpretation of the facts. It is published here, together with a rejoinder from Mr. F. A. Silcox, Chief of the U. S. Forest Service, because the opinions it expresses should preferably be considered in connection with the preceding discussion of Mr. Earle Clapp's paper, "Major Proposals of the Copeland Report." Whether, and to what extent Mr. Gaskill's opinions have merit is for the reader to decide. The responsibility of the Editor-in-Chief and of the three Associate Editors who advised him to accept the article, rests with the decision that it deals with a timely subject, deals with that subject in a fashion to make it worth reading, and thirdly, meets the JOURNAL requirements as to literary standards.

THE mountain has labored and brought forth—not a mouse, but a monster, a *thing* of awesome proportions and disappointing substance. This is not to say that the so-called Copeland Report has no value; there is much in its 1,677 pages that is useful; one simply must regret that the Forest Service has submitted its case by mass rather than by reason.

Made up largely of diagrams and tables the book gives an impression of exactness, authority and weighed conclusions, whereas its 55 separate papers by 56 individual authors and joint authors, not counting three official summaries, are but a compound of ill-digested theories, extravagant assertions and questionable conclusions, with many repetitions and not a little conflict. Of editing there is a woe-lful lack.

But let all that pass; the important query is, is the *National Plan for American Forestry* sound? Is it reasonable? Is it justified? The report is of such bulk that few will find the real meat in it; the danger consequently is that assumptions or beliefs, which have attained a rather wide currency, will tend to be confirmed as fact, even by foresters who

should exercise independent judgment, and frequently don't. Let it be said therefore that the Copeland Report is a challenge to the intelligence and sincerity of every friend of forestry in America. The Forest Service is naturally and rightly the leader, though by the same token, it must justify in reason its every motion.

Getting down to details, one is prepared for affirmation and reaffirmation of the iniquities of "forest devastation" but where in the name of reason is there justification for the assumption by forestry of all the burdens connected with a land policy, which after all is said, is but a reflex of superabundant wealth, coupled with the normal lack of foresight and of technical skill. For instance, much is written about range management. One readily acknowledges that the public range has been well administered by the Forest Service, and that there appears to be no good reason for changing the control, yet who shall say that range management is not quite remote from forestry and forest interest? And why saddle forestry with the burden of unprofitable farm lands? That problem must be dealt with, of course, yet many competent foresters are convinced that if there were

¹All references herein are to the official report, Senate Document No. 12, 73rd Congress, 1st Session.

need for more forest land, and that is not admitted, it would be far wiser to take over some of the excess *good* farm land upon which lumber could be grown more quickly. The Forest Service is slow in failing to realize that our agricultural problem is chiefly one of distribution, or absorption, only secondarily is it a problem of production. Looked at in the large it is apparent that a great part of the soil of the United States is valueless for any present purpose and would better be given over to nature without delay. From a national standpoint it is difficult to see the advantage of losing money through forestry rather than through farming.

As to the other collaterals of which much is made—soil erosion, stream control, water supply—one wonders not a little that foresters should be so anxious to take over problems that have baffled engineers throughout the world. Forestry doubtless is involved in many cases, though by no means so vitally as is popularly supposed. Thus it is declared (p. 302) that water is the people's own energy, and that to sustain it forest cover is essential; that freshets are mainly, or largely, due to the removal of forests from stream basins and can be controlled by reforestation (p. 340); that likewise the lack of forestry is responsible for the waste of arable land, the silting up of rivers, harbors, reservoirs. Are the opinions of forest enthusiasts, with little support in practice (p. 306), to prevail over the experience of generations of engineers?

I hold no brief for the engineering profession as against my associates in forestry, but I am willing to appear for the uninformed, or misinformed, public. And I may be allowed to doubt if any competent engineer has ever declined to employ every resource, every opportunity, every profession that could be helpful. True many an engineering project has failed, in most cases probably through lack of skill, silted reservoirs for exam-

ple; are foresters with but limited experience prepared to do better?

As I see it water conservation and control are problems primarily for engineers, rather than for foresters, because forestry is only one of several means toward ends to which competent engineering is the key. And I greatly fear that the broad claims to special knowledge and to jurisdiction made by the Forest Service and its followers does more than a little towards defeating its most desirable aims. For instance, why claim that deforestation is chiefly, or even largely, responsible for recurring floods in the Mississippi Valley? The record is clear that floods were as wide-spread, though not by any means so destructive, before there was any deforestation as they have been in our time. The simple fact is that nine-tenths of our flood losses occur on lands that have been stolen from the rivers' natural flood plains. If man chooses to occupy those rich lands nature will not fail to collect the price, either in human lives and property losses, or in levees, dredging, reservoirs, better farming, perhaps forestry. Why not leave to engineers the determination of the method, or methods, of control in each case; they in turn to be under a rigid public control in respect to costs and benefits? There need be no fear that foresters will not come in for their fair share.

And with respect to soil losses by erosion, forestry advocates are unnecessarily concerned because the bulk of the local damage is done on faultily farmed land. The remedy is to practice better farming. For the silting of streams and reservoirs the responsibility of forestry is again remote, since much, or most, of the material comes from land never heavily forested, or so long dedicated to culture that its reversion is out of the question. The Mississippi delta long antedates deforestation.

Apparently this whole series of arguments is based upon the theory that for-

estry is a cure-all; that in unlimited doses it will banish every ill connected with the land and its product, and make everybody healthy, wealthy and wise! Here is the way the official summary of the report puts it (p. 42): "It is obvious that millions of acres must be put under intensive forest management, the production of millions more increased by better methods of cutting and fire protection, millions of acres planted, the scale of research greatly increased, aid to private owners increased, and public ownership greatly enlarged. It follows that both the magnitude and the cost of the programs required will be so great that they will necessitate the maximum possible effort of all agencies for years to come."

Enough of this: my chief concern is with the contention that the United States has urgent need of a great extension of its forest interests as insurance against the nation's future lumber requirements, and that since the majority of private forest owners are too indifferent, or too wicked, to undertake the job, the public must assume the burden. And a burden it is, to the tune of \$748,000,000, to be expended within 20 years! (pp. 1299, 1300). The argument in its support, aside from the collaterals already considered, boils down to a declaration that the country will always require as much wood, in pretty much the same forms, as it has used in the recent past, and that, since the new growth is much less than the current felling, new forests must be established, and standing forests managed in the public interest. Using the figures of the report, the annual forest drain is to the annual growth as 2 to 1, if all forms of wood are counted, or as 5 to 1 if only saw logs are considered. It is not needful to dispute these figures, for the report shows times over that they are fallacious, while as to significant trends there are only passing references. The most suggestive statistics are found in Table 1 (p. 247); that exhibits an al-

most steady decline in the consumption of sawed lumber from a peak of 525 feet board measure per capita in 1906 to 275 feet per capita in 1929. That is a fall of nearly 48 per cent in 24 years, through good times and bad! In fairness the lower figures for 1930 and 1931 are not included here. What is the use of talking about a sustained yield and permanent industries, on a basis of 32 billion board feet of lumber (p. 236), in the face of a steady shrinkage in the demand? And shall we learn nothing from the lessening use of vehicle woods or of railroad ties? Twenty-five years ago the country was made to shiver with fear that the railroads would stop running for want of ties. The report says (p. 270) that the number of ties required has been declining since 1906 and, rightly, finds the reason in preservative treatments and mechanical protection by which ties are given longer life. It is easy to argue that increased lumber consumption is found in certain lines (p. 248); that rural needs will maintain a steady demand (p. 250), and that the *plan* bases its estimate of future requirements upon a "normal" consumption (p. 256). But, admitting all that, the evident falling off is nowhere balanced. Clearly some powerful force is at work.

How about other lines than sawed lumber? Fuel wood is commonly held to be the next largest item. The report concedes a "material falling off" in its use (p. 272), though the fact is that the amount used, or required, never has been known. Wood always has been plentiful, outside the recognized treeless sections, and its value rarely more than that of the labor involved in preparing it. In connection with lumbering every forester knows that it usually is a nuisance. And there is another important bearing in considering the future, rather than the present or the past. How about the aspirations of every farmwife for an oil stove, or perhaps an electric stove, as re-

relief from the constant attention demanded by the old wood stove? Or where is the promise of national power plants that soon are to serve every farm, every village? Are we to produce a superabundance of wheat, cotton, electricity, oil and wood? The signs seem all to point to the abandonment of wood as fuel except in remote locations, or as a fireplace luxury.

The facts, and reasonable inferences, relative to a shortage of paper wood are even more striking. Let two references suffice. In Fig. 7, p. 267, it is shown that in 1929, the peak, the United States required, for home use and for export, the equivalent, in round numbers, of 14 million cords of wood. Of that, 6.5 million cords were home grown and 7.5 million cords imported. That suggests a real shortage, but wait a minute. A cord of pulp wood is equivalent, in volume, to half a thousand feet of lumber, therefore the nation's use of domestic wood for paper and pulp was 3,250,000 M ft. board measure, or 9 per cent of the "visable consumption" of lumber (33,680,644 M ft.—p. 248) in the same year. Counting in imports we used less than 20 per cent of our sawed lumber consumption. The report quotes an estimate (p. 266) that in 1950 we shall need the equivalent of 22 million cords of pulp wood, of which 45 per cent, or 9.9 million cords, will be domestic. Though still barely 14 per cent of the lumber production of 1929, it is fair to ask where that is to come from? And also to ask why import so much—or any at all? Let the second reference answer (p. 899), "In an exhaustive study of logging waste in the Douglas fir region in 1926 and 1927 Hodgson found that the waste averaged 42 cords per acre and totalled 6,448,000 cords annually. Virtually all this waste was of species suitable for one or another of the pulp processes. The volume of waste exceeded the entire quantity of pulp wood used (produced) in the United

States." And for good measure let it be noted (p. 1383) "The South has enough cut-over pine land . . . to match our present pulp wood consumption 5 or 6 times over." I incline to a belief that by 1950 we shall use more, much more, than 22 million cords of wood in pulp, paper, rayon, perhaps cotton, and other chemical mills. Yet, if we waste *in one region* a year's supply of wood—and the Douglas fir region produces but 20 per cent of the total lumber cut, why worry—or at any rate why not go slowly about increasing the pulp wood supply?

And this raises the question that transcends all others, in so far as quantity is concerned. Are foresters satisfied to plan for the future on the basis of the tremendous wastes that still obtain? The Forest Service commonly ignores the fact, it knows (p. 1357), as we all know, that 50 per cent, more or less, of every tree felled for lumber is wasted in the woods and in the saw mill. And who does not know also that abundant forests have held off all but minor economies? Lumbermen cannot be held responsible, they have their own troubles consequent upon too great faith in the promise of a timber famine. Tradition, backed by limited vision, must carry the load. Is it our intent to suffer this waste permanently? To continue violating what we are rather proud to call the American principle of utilizing every product to the last scrap? In a word, shall we continue to grow trees for 60, 80, 100 years or more, and when felled waste half their content? And if we develop methods by which this waste is lessened, does it not follow that the yield of our present forest areas will be increased in the same degree?

Finally comes the vital question of debit and credit. The Forest Service is generous in its promises that "forestry will pay" yet exceedingly chary of saying how and how much. On p. 68 it is said "High initial costs should eventually under good management be offset, and

more than offset, by direct financial returns and large indirect returns. The enterprise should eventually be self-liquidating from the public standpoint." And on p. 73 are large figures from which is deduced "These possible rates of income from a fully restored and productive forest resource would permit ample expenditures for forest protection and other production costs and still leave net returns well in excess of \$400,000,000 to \$500,000,000 annually." But one hunts in vain for supporting facts. Imagine a capitalist proposing to put up a new building without balancing the probable net income against the cost, or a utility company setting up a power station without determining pretty accurately its prospective earnings! Forestry of course covers many intangibles, health, recreation, water service, and there probably *are* conditions under which it will pay, or Uncle Sam may be "rich enough to give us each a farm." But setting these possibilities aside, I have little doubt that this indefiniteness, the whole line of vague promises, are responsible for the straits in which forestry finds itself.

After searching the whole report rather carefully, and noting the many seemingly precise, yet actually nonsensical presentations of forest productiveness, I find Table 6, p. 1322 in which is given "Possible gross income from forestry on public lands," and in a foot-note the cool remark, "Interest and risks on the investment were not included in the costs." Similarly Table 7, p. 1323, gives "Estimated gross returns per thousand feet board measure per acre on private forests under intensive and extensive forestry." Be it noted that in both tables are given *gross* not *net* returns, and that though the former foot-note is not repeated in Table 7 the figures suggest that "the returns" are a free gift from Heaven, for there is neither word nor figure to represent "the investment" that even this author appears to recognize as existent. The whole chap-

ter in which these tables are found is so full of "big talk" that one has difficulty in refraining from calling it by the harshest of names, since a non-technical reader would be forgiven for concluding that forestry offers a great opportunity to make money. One blushes that any forester should be so confused in his thinking as to believe that an "investment" can be undertaken without using compound interest and discounting all the risks.

Bear with me if I carry this a little further, for the benefit of our unknown layman. Table 7 says that "intensive forestry in New England" will produce 307 feet board measure per acre and year, and that stumpage is worth \$9. We can accept both figures. Table 5, p. 1320, gives "Representative costs or intensive private forestry" and shows that in spruce-fir-hardwood type, taxes, protection, management, etc., total 49.7c per acre and year. Ignoring the rental value of the land we can round the figure to 50c per acre as the annual *cost* of a typical forest. Now, using the well-known formula, it is easily found that this 50c carried at only 4 per cent for 80 years amounts to \$275.62; the *real cost* of an acre of saw timber grown under most favorable conditions. And by simple multiplication the 307 feet annual growth becomes 24,560 feet, or say 25 M ft. board measure as final yield. Thus, there is found a stumpage cost of \$11.02, 22 per cent more than the \$9 of Table 7. If the calculation is made with a 5 per cent interest rate the cost mounts to \$19.42! And these figures relate to favorable, not average, conditions. Who is ready to predict the profit from sub-marginal, or abandoned farm lands? Or put the question another way—in the absence of proof that forests managed under the program of the Forest Service will yield lumber at approximately present cost, what becomes of the contention that the nation's demand for

lumber in present forms will continue to be as great as it now is? (p. 23).

Considering these facts, or what to me appear to be facts, it is difficult to escape the conviction that timber owners have been doing some calculating upon their own account, and that therein, with numerous risks added, lies their unwillingness to make long time investments. They know, we all know, that forest crops, whether from plantings or from "conservatively cut" stands, are bound to cost more than the volunteer forests from which our wood supply has been, and still is, drawn. They know also that forestry can have little *economic* being until that make-weight shall have been largely removed. In the final analysis these things, not selfishness nor ill will, are the reason for what the report calls "the breakdown of private forest ownership." The Forest Service is right enough in refusing to say how and how much forestry will pay, but are we willing to go with it for a great public adventure based, not upon demonstrated facts, but upon assumptions that clearly are questionable and often out of harmony with recognized movements?

Do not get this wrong I beg you. I still have somewhat of a reputation as a forester, and have the advantage of many in that I am free to express my real convictions. One that belongs to this protest, or appeal, or what you choose to call it, is that foresters and forestry are on

trial as they never have been. In the language of the day forestry has been over-sold, the public has been filled with beliefs, which if not false are at least overstrained. We need, and shall not fail to have, more forestry, and more foresters, than the country has yet known. But I can see no danger of a wood famine, the outlook is all the other way if we recognize the decline in population increase, the growing use of substitutes for lumber as inevitably mounting costs bring other materials into competition, and above all if, or rather when, the frightful waste in saw logs is eliminated. That American enterprise and ingenuity will accomplish this before our present 20 or 30 years' store of mature and maturing timber is gone, I have not the slightest doubt. Whatever the outcome it is ridiculous to base future plans and calculations upon 80, 100 or more years, even upon 40 or 50 years, as necessary to produce the lumber that we undoubtedly shall need. And as for recreation, wild life and all social uses of the forest, let there be no fear. We easily can have, are bound to have, all that is desirable.

American foresters speak up! The plan of the Forest Service is a blind leading that well may result in discrediting forestry much as some other enterprises are discredited, or at least burdened, by stagnant thinking and overloaded tradition. Maybe your jobs are at stake, quite surely your reputations are.

FORWARD NOT BACKWARD

By F. A. SILCOX

Chief Forester, U. S. Forest Service

GASKILL'S objections to the program proposed in the Copeland Report boil down to three main points: (1) Forestry should mind its own business; (2) We do not need more or better forests; (3) Forestry will not pay. Let us consider these in detail.

1. Asking "Where . . . is there justification for the assumption by forestry of all the burdens connected with a land policy?" Gaskill attempts to show that forestry—meaning the U. S. Forest Service—is butting into matters in which it is incompetent to act and which lie outside of its proper field.

He begins with range management, which he suggests is "quite remote from forestry and forest interest." It is difficult to understand what processes of reasoning could lead to such a conclusion, unless one assumes that Gaskill did not read those sections of the report which deal with range management. As their titles indicate, they are concerned with *forest* ranges only. Some 246 million acres of commercial forest land and 88 million acres of noncommercial forest land are grazed by livestock. Obviously, the forage resource on these lands is a part of the forest resource and its utilization has a very intimate relation to the revenue from forest management, as well as to the protective influence of the forest cover and the reproduction and growth of the timber crop. No one who thinks about the matter at all will doubt that forestry has a vital interest in the management of forestry ranges. Nonforest ranges are not involved in the Copeland Report program.

Next, Gaskill asks "why saddle forestry with the burden of unprofitable farm lands?" since "it is apparent that a great

part of the soil of the United States . . . would better be given over to nature without delay." Here again is a straw man. The report is not concerned with the millions of acres of nonprofitable farm lands in the arid and semi-arid regions, but only with those in the humid *forest* regions. The Forest Service realizes, as apparently Gaskill does not, that if lands within the humid forest belt are "given over to nature" they will sooner or later become forest lands. It also realizes that these lands, although no longer profitable for farming, include some of the very best lands for forestry by reason of their accessibility, topography, and timber growing capacity. Moreover, the welfare of neighboring or intermingled agricultural and industrial communities is largely dependent, in many instances, upon their productive utilization. Their most effective and economical utilization usually, though not always, means forestry.

Although admitting that forestry is doubtless a factor in the prevention of erosion and the control of run-off and stream-flow, Gaskill appears to resent the suggestion that foresters might contribute toward the solution of these problems. Generations of engineers, he says, have been baffled and have failed (without forestry) to find a solution. Why, then, should foresters try? Even if forestry should be involved in the control work, engineers, not foresters, should do the job. Again, using his advice of a straw man, he accuses the report of claiming that forest cover is essential to sustain water supplies, that freshets are mainly or largely due to removal of forests and can be controlled by reforestation, and that lack of forests is responsible for erosion and silt-

ing. Curiously, the pages which he cites reveal no such assertions. Nor does the report claim that the Mississippi Valley floods are chiefly, or even largely, caused by deforestation, as Gaskill implies. It does present a mass of convincing evidence that under certain conditions forest cover has an important and generally beneficial influence on run-off and stream-flow, that in a great many instances serious erosion and silting have followed destruction of the forest cover, and that the severity of floods has been intensified by deforestation. These are demonstrated facts, not opinions.

The most charitable interpretation that can be put upon Gaskill's remarks on the soil erosion problem is that he is not familiar with the situation. He agrees with the Copeland Report that the bulk of erosion (in certain regions) is on land that has been faultily farmed. The remedy, of course, is simple—better farming! This, in the face of the fact that some 50 million acres of cleared land within the humid forest regions is lying idle because sheet or gully erosion has rendered it unprofitable for cropping or even for pasture, and that the area of such land is increasing rapidly. It is granted that much of the eroding agricultural land can be kept in crops or pasture if suitable methods are employed, but it is stated specifically (p. 326) that this land is beyond the scope of the report.

In answer to Gaskill's question, then, it may be said that: (1) The Copeland Report program does not undertake to assume *all* the burdens connected with a land policy; and (2) No one has a better right than foresters to be concerned with policies for the proper and socially desirable uses of *forest* land. The program deals with forest land.

2. Gaskill argues that we do not need more or better forests because wood requirements will continue to decrease; all that is needed can be produced from slabs, branches, and other material now wasted;

whatever the requirements, we can grow adequate supplies in much less than the 40 or 50 years that are commonly supposed to be necessary; and consequently the situation will take care of itself during the 20 or 30 years that remain before our present timber supply is exhausted. These arguments go back to Gaskill's pet idea (see *Journal of Forestry* for March, 1929) that timber requirements of the future will be satisfied with wood in the form of cellulose and that it will be better to grow faggots that can be cut with a lawn mower or a jack-knife than to grow large trees for saw logs. This fantastic notion probably has its roots in a subconscious attempt to rationalize—to make the best of the shortage of good timber that is inevitable if present *laissez-faire* forest policies are continued.

It is hard to believe that Gaskill intended his advocacy of "faggot forestry" to be taken literally. He surely must remember enough about the biological behavior and life history of forests to realize, if he stops to think, that even cellulose cannot be produced most economically, on a continuous basis, from faggots. Not only does mean increment of most species culminate at a fairly advanced age, but long experience in many countries has proven that short rotations result in deterioration of the site, failure of natural reproduction, and reduced productivity.

The assertion that the Forest Service commonly ignores the fact of tremendous waste in timber utilization is, of course, utterly without foundation. The desirability and need for reducing such waste to the fullest practicable extent have been repeatedly emphasized by the Forest Service, and a great deal of its research work has been directed toward this end. However, it should be remembered that there are other forms of waste that are just as serious. Fires, diseases, and insect attacks kill or destroy tremendous quantities of standing timber and the defects which they cause in surviving trees are major factors

in utilization wastes. Deterioration in forest yields resulting from improper methods of cutting and management, and the conversion of millions of acres of potentially productive forest land to a state of idleness are wastes that cannot be ignored. Enormous social and economic wastes result from the cut-out-and-get-out policy that has characterized so much of American forest exploitation.

Chinese peasants may utilize every product to the last scrap, but one can hardly agree with Gaskill that this is an American principle. The American people have long had the reputation of being among the most wasteful people in the world in their use of all sorts of materials. Be that as it may, parsimonious use of reproducible natural resources, such as timber, while vast areas of potentially productive land be idle and millions of men are seeking work, is far more wasteful not only from the social standpoint but even from the standpoint of good business, than lavish use and reproduction of the resource.

Of course, prophets and statisticians are not infallible. It is just as impossible to prove that our grandchildren will need or even want great quantities of large timber as it is to prove the contrary. Careful estimates of future requirements that have been made both in this country and abroad, all agree that they will. It is hardly necessary to argue that our grandchildren will be better off if they inherit a country with abundant forests than if we leave them only denuded or brush-covered hill-sides. They, not we, should decide whether they want to use lumber. Perhaps they may be sufficiently civilized to let some of the forests stand if there should be more timber than they need. The existence of abundant supplies, even if not utilized, will not hurt them. The lack of needed supplies, on the other hand, can hurt them. The law of supply and demand cannot produce timber when it is needed unless the trees are already grown.

3. Gaskill's third main objection to the proposed program seems to be based upon his conviction that it will not pay. He professes to be shocked at the tremendous burden involved in the investment of \$748,000,000 over a period of 20 years. (Fortunately, perhaps, for his peace of mind, he apparently overlooks the fact that this is for land acquisition only, and that a total public expenditure of \$2,315,000,000 is proposed.)

It is difficult to see how the investment or expenditure of either sum can be a burden, from the collective standpoint. The expenditure for acquisition will involve merely a transfer of ownership of forests from private owners who will not use them in the public interest because it is not profitable to do so, to the public. In exchange, the public will transfer to the forest owners certain pieces of paper which they can either invest in productive enterprises or use to purchase commodities. The \$748,000,000 will not be destroyed nor will it leave the country. In fact, its use for the proposed purpose will tend to increase the national wealth, not to reduce it. Likewise, the expenditures for maintenance and development of the forests will go for wages and materials within the country and will thus tend to increase purchasing power of the workers and returns to capital employed in industry.

The sum of \$116,000,000 a year is but a small fraction of one per cent of the national income, even in these depression years. It is perhaps 5 per cent of the gross value of forest products in normal years. It is an insignificant fraction of the sums spent annually for cosmetics, or candy, or motion pictures, or beer. The entire 20 years' expenditure is only a fraction of the amount which American "investors" have donated under the guise of loans to foreign countries since the war, and for which there is slight prospect of repayment even in the form of cosmetics or beer.

Gaskill says: "Imagine a capitalist proposing to put up a new building without balancing the probable net income against the cost, or a utility company setting up a power station without determining pretty accurately its prospective earnings!" This will require no great stretch of the imagination on the part of millions of investors who put their money into office buildings or into Insull enterprises during the last 15 years. He also says: "This indefiniteness, the whole line of vague promises, are responsible for the straits in which forestry finds itself." Possibly the straits in which many investors in practically all lines of endeavor find themselves may be attributed to the promises, not always vague, that were made by the promoters of the various enterprises. This does not prove that all investments are unwise, nor is it a valid argument against forestry. There is an element of risk in any long term investment.

The assertion that "forest crops, whether from plantings or from conservatively cut stands, are bound to cost more than the volunteer forests from which our wood supply has been, and still is, drawn" cannot go unchallenged. It is fairly plausible so far as planted stands are concerned if we compare them only with the best of the most accessible remaining virgin forests. Even with these forests, timber can generally be produced more economically by conservative cutting than by destructive exploitation. But to say that timber from managed forests in New England is bound to cost New Englanders more than equally good timber from the virgin forests of Siberia, or even from many portions of the western United States, would be ridiculous. It is even less likely that timber can be produced more cheaply from volunteer forests than from managed forests in the future. It would be just as reasonable to say the same thing of rubber, pecans, strawberries, oranges, or hay, or to say that the world

can meet its requirements more cheaply from volunteer than from cultivated crops of wheat, corn, potatoes, or cotton.

The key to much of Gaskill's doubt regarding the profitability of forestry is revealed in the statement: "One blushes that any forester should be so confused in his thinking as to believe that an investment can be undertaken without using compound interest." He suggests 4 or 5 per cent as a reasonable rate. Why discriminate against forestry? Other investments do not generally return 4 or 5 per cent compound interest, even over one century. The average return on all capital invested in the United States during the last 100 years was only about 3 per cent, simple interest. It was earned during a period of rapid exploitation of rich virgin natural resources, rapidly increasing population, and unparalleled growth of cities, manufactures, transportation systems, and foreign trade. Now, with the best of our natural resources depleted, our population growth slowed up, our manufacturing plants and transportation systems in excess of our needs, and foreign trade diminished, perhaps permanently, average long-time earnings at such a high rate as 3 per cent can no longer be expected.

Individual investments or classes of investment may temporarily earn higher than average rates, because of good luck, special favors from government, or other unfair advantages. It should be fairly obvious, however, that the aggregate investment of the country as a whole can earn compound interest only through increase in the national wealth. If the income is received annually, it must be re-invested so that it, too, may earn interest. But if we accept Gaskill's view that the decline in timber consumption during recent years is indicative of a continuing trend, and if we are perfectly consistent and believe that recent decreases in consumption of numerous other materials also mark a permanent drop in our re-

quirements, the prospects are not bright for further increase in national wealth.

Approximately three-fourths of our national wealth consist of lands and buildings, machinery, tools, livestock, farm equipment, railroads and other public utilities. The remainder is chiefly stocks of consumers' goods (agricultural and manufactured products), with a relatively small amount of gold and silver coin and bullion. There has been a great shrinkage in the value of all of these, excepting money, during the past few years. The trend toward reduction in number of farms and in cultivated area seems likely to continue. There is nothing in the agricultural situation to justify expectation of any very large increase in aggregate value of farms. If our need for timber should continue to decrease, as Gaskill believes, there is little likelihood of a material increase in value of forests and forest industrial plants. Mines and oil properties will decrease in value as depletion progresses, if for no other reason. Most students of population trends look for a stationary or even a decreasing population in the not distant future, and a cessation of urban growth. If they are correct, no large increase in values or urban real estate can be anticipated. With population growth at or approaching a stand-still, with per capita consumption of many commodities decreasing, and with the loss of foreign markets, no large expansion in aggregate value of factories and equipment can be expected. Railroads, street railways, telegraph and telephone systems, and other privately owned public utilities have apparently passed the peak of their expansion. The aggregate value of stocks of consumers' goods will not increase with a stationary population unless the standard of living increases, which is not to be expected if we accept the theory that per capita consumption tends to decrease.

One may wonder, therefore, how any large portion of American investments is

going to earn compound interest for a long period in the future. (In view of recent experiences with foreign investments, a large portion of which have evaporated into thin air, these do not seem to offer an outlet.) Inflation or devaluation of gold would mean a nominal increase in the value of capital already invested, but it would not yield compound interest over a long period. The only way that our national wealth can increase greatly in the long run, if population remains approximately stationary, is through a material and continuous increase in standards of living. This would mean increased consumption and hence production of goods, which would result in increased capital value of productive land and productive plant and equipment. If such increased consumption should materialize, forest products and forest investments stand as good a chance to benefit as most other productive enterprises.

The utter fallacy of expecting compound interest, even at a low rate, from forestry or any other investment over a long period may be demonstrated by the following parable:

Suppose that Alexander the Great, following his victory over Darius near Arbela (331 B. C.), had invested the equivalent of one cent, American money, in Babylon Brick Industries, Inc. Let us suppose, further, that the investment prospered, earned 4 per cent net each year, and that the earnings were continually reinvested at the same rate. Eventually, the bricks would have turned to gold, because Alexander's investment with accumulated earnings in this year of 1934 would have amounted to the staggering sum of 3,600 decillions of dollars—3,600 followed by 33 ciphers. This would be sufficient to pay for more than one billion worlds as large as the earth, if they were made of solid gold worth \$20.67 an ounce.

Alexander probably never heard of forestry, and may never have planted a tree. However, just for the sake of the argu-

ment let us suppose that he invested another cent in the planting of a tree to commemorate his victory. Let us suppose that this tree, perhaps a Sequoia, grew and thrived through the centuries down to the present. Sequoias have lived that long. Let us also suppose that there have been no expenses for protecting this tree, and that it has always been exempt from taxation. Even so, according to Gaskill's theory, Alexander's cent was undoubtedly wasted. It should have been invested in bricks or some other enterprise that would have returned 4 per cent, compounded. Yet—one may wonder whether any material thing has come down to us from the time of Alexander that is worth as much, in proportion to its original cost, as any one of our 2,000 year old Sequoias.

But perhaps, after all, the question of how much a forest investment will earn as compared with other investments is not the fundamental question, where public forestry is concerned. Why should public investments in forestry be expected to earn compound interest, or even simple interest? Government is not business, and in spite of popular slogans to the contrary it should not pursue the same objectives. For government to seek a profit on its undertakings is contrary to the underlying philosophy of either socialism or capitalism. In the one, profits have no place; in the other, profits are supposed to be left to private enterprises.

We do not expect to receive a direct profit or interest on our expenditures for highways, parks and playgrounds, public schools, police, prisons, charitable and other institutions, fire departments, courts and legislatures, or for the maintenance

of an army and navy. Not all of our citizens are agreed as to the necessity of expenditures for all of these purposes, but the majority believe that they are necessary, and all have to help pay for them.

Let us play fair with our grandchildren. Let us leave them forests which they can use for timber, for playgrounds, or merely for scenery, as they choose. All that we can leave them is the aggregate of resources which make up the United States. Stocks and bonds are only claims to portions of these material resources. From the collective standpoint, the quantity of coin and bullion that we can bequeath will not be affected by the use that is made of it in the meantime. Battleships, locomotives, automobiles, factories and machinery are ephemeral forms of investment—few of them will last through two generations. We cannot store up consumption goods for later generations to consume—these are not sufficiently durable. We cannot by the investment of money or labor increase the amount of mineral resources; to the extent that we do not consume these ourselves, they will pass on to our descendants.

About the only long-term investments that we can make that will benefit our grandchildren—and if they are long-term investments we must, collectively, consider our grandchildren—are investments in maintaining and increasing the productivity and utility of land and its improvements. If all of our available resources and efforts are needed in other enterprises which will result in greater benefits in the long run, then we should not invest our capital and energies in building up forests. That is the important consideration, not possible monetary profits.

AFTERNOON SESSION, DECEMBER 29, 1933

SUBJECT: THE PRESIDENT'S EMERGENCY CONSERVATION PROGRAM

Chairman: Louis E. Staley, Secretary, Pennsylvania Department of Forests and Waters.

Principal Speaker: E. W. Tinker, U. S. Regional Forester in charge of Region 9, which includes the Lake States.

Discussion Leader: Nelson Brown, New York State College of Forestry, Syracuse, New York.

Mr. Staley: We have as a subject this afternoon just as interesting a one as that discussed this morning. It is "The President's Emergency Conservation Program." I am sure it needs no introduction to any of you because most of you have something to do with it. I am also sure the speaker, Mr. E. W. Tinker, needs no introduction.

Mr. Tinker: Gentlemen, I trust you

will accept this paper as my personal viewpoint in an unofficial capacity because it is a rather critical paper—along critical lines, of previous public forest practices. If you will accept it in that light I will appreciate it. As a matter of fact, I have taken the liberty of writing a short paper relative to a hobby of mine which most of the forest schools in the Region know as mine, as I have expounded it for the last three or four years.

THE PRESIDENT'S EMERGENCY CONSERVATION WORK

By E. W. TINKER

Regional Forester, U. S. Forest Service

THE President's Emergency Conservation Program is in effect, and its success is no longer a matter of conjecture. Public approval of the program has been general, and it will be surprising if its continuance is not a matter of public insistence. It appears futile for me to outline to you the steps that were taken in organizing the work and effectuating the plan. Every forester and most laymen who are interested in public affairs know of the part played by the Departments of Labor, War, Interior and Agriculture, and the organizational relationship of the different government services, as well as the state conservation organizations.

Since the President's plan had two major objectives, accomplishment should be measured in terms of both, and not in conservation alone. The improved morale of the enrolled men, their changed habits of life, the relief furnished their families and the training of these young men alone stand as a monumental return from the carrying out of the vision of the President. As far as I know, no basic defect has been in evidence in the original concept of the plan.

This is a meeting of foresters, and I should like to confine my discussion to the relationship of the Civilian Conservation Corps to forestry plans, or lack of plans. Necessarily, I speak provincially.

as my experience with the Emergency Conservation Work has been restricted to the camps in the North Central Region with which we have direct administrative contact now totaling 148 in number; 81 of these camps are national-forest camps, and the balance state camps. If I indict myself by my own testimony, I plead sufferance because of recognition that delinquencies that appear striking to me may be confined to this Region.

From public statements, it seems perfectly clear that the President and his advisers when the project was decided upon had in mind forest conservation as the major conservation activity that would be undertaken. Necessity may have broadened the scope of the plan since that time, but originally forestry work was the basis for the whole operation. Labor used on forest work, with the exception of protection improvements, was confined to public forest land, and therefore whatever of commendation or condemnation of forestry programs is justified, lies at the door of public foresters. Just how far public foresters have succeeded in grasping and utilizing the full potentialities of the labor offered, is to my mind a question that will bear scrutiny, not because it might cause us to bewail lost opportunities, but because it might influence our conception of the future. Here was an opportunity such as foresters had yearned for and advocated. In what position did the President's plan actually find us?

In my judgment, we were, and are, lacking in three basic fundamental requirements to have met the plan when it was initiated and to meet its continuation in the future:

1. No comprehensive, coördinated master plans for forest development in all its aspects were in existence.

2. Specific coördinated plans for all phases of essential forestry operations for specific logical working units were non-existent.

3. No real attempt had been made to analyze from a management standpoint the jobs to be done, the relative priority of jobs, the justifiable expenditure, or the man-days of labor that could profitably be used.

I might well have preceded No. 1 with a general statement that no comprehensive plans analyzing public requirements and specifying action required in the way of public forests had as yet been prepared. It appears clear to me that we have followed an opportunistic and uncharted course, and time alone will tell whether the results will measure up to our expectations or redeem our responsibilities to the public. I do not wish to imply that thought has not been given local conditions in establishing public forests, but rather, there appears to have been too little analysis of requirements by regions and nationally. Perhaps the best testimony indicative of this situation is the fact that inspired by the Copeland Report we are just now making a thoroughgoing analysis of the situation with the objective of tying a national forest system to the ground, based upon the public purposes that will be served.

In the North Central Region the initiation of the work of the Civilian Conservation Corps and its subsequent prosecution as far as national-forest camps and units were concerned immediately indicated a crying need for master control plans, tying all forest activities together in a manner: . . . that would permit determination of relative priorities, and permit essential administrative control and orderly progress. It is true, plans of a sort have been developed indicating general objectives, and strangely enough, the better plans were those supporting and defining everything but forestry operations. Our road plans and our improvement plans were pretty well along, and reasonably well tied to the ground. In one instance in this Region, a master recreational plan existed. A few scattered

policy statements and timber management plans had been prepared, largely covering the harvesting of timber crops, but nowhere were there plans that might be used to determine the best use of C.C.C. labor that would enable us to proceed with certainty that proper relationships were being obtained.

With respect to plans for specific working circles, they were practically nonexistent. In determining jobs to be done from different camp locations, we found it necessary to establish the camps and then work out the plans of work, a most unsatisfactory procedure. Even with the abundance of labor available the vast amount of work required enabled us to utilize on relatively essential activities, all of the men turned over to us for woods work. Our showing of accomplishment may be creditable. However, we were to a very considerable degree unprepared and the activities undertaken were those most easily attacked, but not necessarily the most essential. Had we been prepared, our initial request for camps would have been at least double the number requested and granted.

We have muddled through on this undertaking, and it has brought home to us in a very forceful way the need for analysis of jobs and analysis of conditions upon the ground to determine required work. No proper administration of public forests can be had without such analysis. It is absolutely essential that we know more of man-days of labor, costs and returns from public forest management, and what public forest management should consist of. The C.C.C. has at least in Region 9 forced upon us recognition of the necessity of analysis as a basis for plans and it is our hope that such analyses and plans will in the future form the basis of public forest finance. It is true that we could with ease use the allotted labor on the apparently endless improvement work, but it was and is our conception that improvements should be

made secondary to consideration of bringing the land back to a high degree of productivity.

In this discussion I have pointed out what appeared to me to be glaring deficiencies in public forest management and undertakings that have been brought sharply to our attention through the initiation of the C.C.C.

It seems clear that justifiable use of labor on forest work will vary by regions. Controlling principles can and should be established for the entire United States. The application of these principles should involve such considerations as future markets, accessibility, subsidiary benefits and sociological effects. For instance, in the Lake States public forests lie in close proximity to the world's best market for wood products. The growing of forests in order to produce wood is clearly indicated and the desirability of intensive forest culture. Lacking a national controlling policy, we in the Region are developing in connection with the C.C.C. labor and other labor that is available plans for the treatment, under the best forestry practices that we know of, every acre of public forest lands in the national-forest system, in order to obtain maximum production in quantity and quality. If our plans mature, professional foresters will have an opportunity to practice their profession. Obviously the continuation of the C.C.C. will make possible the carrying out of intensive cultural operations we find so essential. Such plannings and such action has literally been forced upon us.

I do not wish to leave any misunderstanding with respect to my position in this matter. I do not believe necessary the same treatment for all regions, or all public forests, national or state. My plea is for an analysis of the situation and a clear-cut, well defined approved plan with controlling policies by regions. This plan in the Lake States, in my judgment, involves the initiation of forest

practices comparable to those prevalent in Europe. It is our desire and intention, as far as the national forests in the North Central Region are concerned to operate under a policy that will make essential improvement work subsidiary to plans for forest production. We wish the viewpoint of the forester and not the engineer to dominate. If we are able to put such a plan into effect the profession and the forest schools should have a feeling of profound gratification for the President's Emergency Conservation Work, for it will have resulted in the elevation of foresters to their proper caste in public forest work. Such action on a large scale will, I believe, bring to the public a new conception of what forestry is, and what social and economic benefits can and should accrue from it.

Crude as our efforts may have been, lacking well defined plans and analysis of conditions on the ground, yet one other outstanding requirement if the C.C.C. or some other form of labor is available for forest work has become evident; that is research in the basic requirements of forestry to permit intensive forest culture. We have proceeded already beyond the bounds of certain knowledge. Much of the work is on a trial-and-error basis.

There is an urgent immediate need for knowledge in the fundamental technique of forest culture in the different types and under the different conditions that exist in the North Central Region.

In concluding this brief discussion which might have been continued interminably, I wish to express the hope and belief that the continuation of the C.C.C. offers the forestry profession, and particularly public foresters, the opportunity to elevate the standing of their profession, to redeem a public obligation in the form of more acres in a highly productive condition to develop the full social and economic value of forests and to renew their own faith in forestry. The diversion of C.C.C. labor from forest work to other activities but thinly veiled as conservation to me represents a real challenge to the profession. The thoughts I have expressed might well have been written whether or not the C.C.C. ever existed, but its existence has forced an issue upon us that we should not fail to recognize.

Mr. Staley: The next speaker on the program was to have been Mr. Robert Marshall but unfortunately he could not be with us. Mr. Nelson Brown has been asked to lead the discussion.

COMMENTS

By NELSON C. BROWN

New York State College of Forestry

I AM attempting to pinch hit for Bob Marshall. Last summer I inspected the Second Corps Area. I went West to check up on the boys. Last spring I saw the inauguration of the most important step in forest conservation since the inauguration and extension of our National Forest Program in the first Rooseveltian era. This program meant the assembling of a greater number of

men than has been gathered together since the Spanish-American War. It was the greatest peace-time enrollment—more rapid even than at any time during the World War. Three hundred and ten thousand men were assembled in 1,140 camps. There were complications and difficulties. Mistakes were made. I want, in commenting on Mr. Tinker's paper, to say that perhaps he did not go quite

far enough in saying that we were not prepared to meet the challenge. We did not measure up to the biggest function ever presented the American public. We have a President with a greater perception and finer vision of what this program means to the future than we have ever had in forestry. I would like to review three of the great results that we have seen as a result of nine months experience of the C.C.C. program.

1. It has definitely relieved the stress and hunger in at least 310,000 homes by the allotment of \$25.00 a month to those homes. I do not know that we appreciate fully what that has meant to many homes. These people are not only grateful and appreciative but it has meant the difference between life and something else.

2. It has stepped up the forestry program at least 20 to 50 years. It has shoved our program ahead very definitely and successfully. That is a second great achievement which we may review.

3. And what I regard as the most notable achievement of all.—We have made good citizens and made men out of a great army of young people who may have turned to other ways. Certainly, we know most have been trained for life in school and in college, have prepared for life, and have had no opportunity to participate in that life. These young men often have not had a job for from 1 to 3 years. They were discouraged, disheartened, disappointed with life. They had had no opportunity to put into effect the standards and plans and ideas learned in their schooling. Along came this great program and swept them into it. I visited one camp in the Northwest where there were twenty paroled Sing Sing prisoners. Nineteen were very much men. I would like to expand on that idea of the human benefits that have come out of this program, but I do not want to take up much time in that di-

rection. I was amazed at the uniformity of the ideas and ideals, also the viewpoint of this great army of young men. I asked some of the boys why others had left. The observations were that this number was exceedingly small. The almost universal reply was "They couldn't take it." I was very pleasantly surprised when I got to a camp in Washington State and found emblazoned in great words over the camp, "We Can Take It." They were proud of it. We should carefully review the great change that has come over this great army of young men and its effect indirectly upon their homes and upon their friends.

So much for the three great accomplishments that we have achieved. I would like to go along and discuss the participation of the forest officers the way they coöperated, the way the Army did or did not coöperate with the foresters and laud both organizations. A good deal of good has come out of it but I would prefer, in my brief time, to discuss some of the things that are wrong. We can say this has been a great program. Has it been successful? Yes. Has it been entirely successful? It has been weak in one or two spots. There has been trouble in practically every camp. Communists and quitters—one to five or more in every camp. It was a period of readjustment from urban conditions. There were thousands of boys who had never had an axe in their hands. They were suddenly transplanted to unusual conditions. Readjustment was necessary in the minds of the Army people almost as much as it was in the minds of the C.C.C. boys themselves. In Idaho within 24 hours 3,300 young men from the sidewalks of New York were detrained and sent out into about 16 or 17 camps.

Four camps were reached only by spur line railroads. The boys were used to the bustle and familiar signs of the city streets. They were suddenly transported

into this wilderness where the very silence was alarming. The boys were homesick—I could tell some interesting stories of the brave attempts in adjusting themselves to the new life. The Forest Supervisory Staff and the Army men did a great job. Let us review, if we may, some of the things that might have been corrected and may still be corrected. I want to be constructive in my criticism.

1. Camp construction required entirely too large expenditure of man-days of effort. This is often unnecessary. Some of the camps were dolled up in great fashion. The most dolled-up camp was along the Columbia River Highway. It was the showplace of the C.C.C. camps. A horde of people passed by it every day. On inquiry I found that the work was done not during the working day but Saturdays, Sundays and after hours as a matter of personal pride on the part of the boys themselves. It was a very effective piece of work. Unfortunately, most of the camps took the time of the boys. This Columbia River Camp made a great impression on a large number of people. The enrollees in this camp were mostly Chicago boys.

2. Too many men have been retained in camps for miscellaneous duties. This has been reduced, I understand, to about 24, but I think 22 or 23 men for summer camps. Winter camp conditions are not the same as in the summer. The most efficient camp, the camp which finished its construction earliest has the cheapest construction cost and the largest number of effective hours by the boys themselves on the job, is a camp in the West run by a Second Lieutenant. I never saw better morale anywhere. Many camps have from 30 to 47 men in them on miscellaneous detail. I am not sure whether the Army officers were instructed or informed as to the nature of the work to be done or the objective. I know there were some conflicts of ideas and funda-

mental principles between labor, Army and Forest Officers. Many did not realize that there was a good deal of effective and useful work to be done. I think we have had entirely too many men around camps. Thirty to 50 and some have 60 men. Men apparently assigned to the forestry personnel for fixing up roadways around camps, etc.

3. The effective hours accomplished by the boys themselves have been entirely as a whole, too low. Director Fechner made 6 hours effective work the standard when the program was first started. This was extended to 8 hours on the job. Nothing was said about the length of travel time, lunch hour, etc. About 3 hours was the effective time in 110 camps visited in the West. Most of them ran around 4 or 6 hours. Some kept up to 7 hours and very easily could have been kept up to 8 hours. The boys are perfectly willing to work. In one camp where the boys asked to put in $9\frac{1}{2}$ hours, no complaint was received. They must be occupied in educational facilities, work, or some form of healthy, constructive activity.

4. Location of camps should be restricted to federal and state properties and such other properties as may be controlled by properly constituted authority. This is a federal venture—additional form of relief should be designed primarily as a federal program. Most were on public forests—most on national forests where they belong, also on state forests. The program was initiated and was used as an excuse for most anything anyone wanted done out of doors. I have not been to a single camp in the Lake States so do not know anything about the Lake States camps. There is too much willingness on the part of federal authorities to agree to most anyone's ideas as to something to be done out-of-doors. One camp in the heart of a town of 18,000 people, which was no place for a camp,

was engaged in the conduct of some bug control work. They were very busy doing bug control work and accomplishing, apparently, a lot. I am not sure whether it was being effectively accomplished.

5. Local requirements and conditions should prevail in determining the type of equipment, clothing, and other matters. In the Northwest the men were used in snag felling. In California, 395,000 snags from 50 to 250 feet high were felled. There was a bad fire menace there. Up to September 1 they had felled that number. The boys were expected to climb on spring boards and fell trees in ordinary shoes. No one should work from a spring board without calk boots. I am not criticizing the Forest Service or any organization responsible for getting shoes there on time, but local conditions should prevail.

For years we have been clamoring for more money, bigger organization, in order to do something. We had the opportunity but did not know where to go. I do not mean that forestry officials have not done a great job but when it came down to road and trail construction they did do a big job. Practically no trees are being planted in the West. Little thinning have been undertaken. I am referring particularly to 457 camps in the Fifth Corps Area. Here the foresters say that is not forestry, that is engineering. Yet we fail to appreciate that roads and trails are the very arteries of forest management. We cannot apply forest management without roads and trails. They are needed first for protection. Secondly, they are needed to get the forest products out. We have stepped up our program from 20 to 50 years, at least. We are converting great wilderness areas into accessible forests as far as utility is concerned, whether recreation or timber cutting. Thirdly, had we allowed a great many men to rush out and thin the woods, it would have been ruinous without prop-

er technical guidance. The boys had to be worked. We did not think they were up to the job of thinning. I can level part of this indictment against these schools. They do not entirely lend themselves to the job at hand. They teach the young men how to think. There was no one who could tell what to do in each stand and under different sets of circumstances.

Regarding permanency. The continuation of this program will depend largely on federal finances and the unemployment situation. I would like to see it continued and have it ebb and flow with the tide of unemployment. If we have increasingly severe conditions, we should increase the program. On the other hand, decrease. I would like to see it continued and it may continue as a definite part of our federal conservation program. If it does, I think it is up to the foresters to re-orient themselves and draw up master plans by grades or by types. We have been caught flat-footed in some of our problems. Just a word on something we talk about and not too loud, and that is political influence. It is a delicate subject. Many of us are afraid of it. Our conservation program has been singularly free of political preferences and we hope to continue to keep it so. Our Society of American Foresters, under its new president, or under any president, should be the motivating force to protect any great federal conservation program against political influence. If major jobs are to be filled by political preferment instead of skill or ability, the Society should take a definite position. Some federal officials in the West were undoubtedly alarmed over what some of the boys in Washington might do to them if they did not defer to local political committees. It might take courage but we have an honest policy and are doing a good piece of work and we should exhibit greater courage in backing it up.

This situation has not been bad to date, though the whole morale of the Forest Service in one state thought it would break down under the weight of it. We must exhibit courage and move forward in this program. It is a challenge to foresters and it is up to us to meet it and do the best we can.

Mr. Staley: This subject is so broad and so interesting that we could spend all of the afternoon and tomorrow morning on it and the rest of this interesting meeting, and not finish it, perhaps, but we are limited to an hour and a half on this discussion, and since we began about 25 minutes late, I think we will just continue for about 10 or 15 minutes longer.

Speaking of politics, I might say that Pennsylvania has more than 100 camps, and of course while we have had in Pennsylvania quite a bit of pressure in a political way, yet we have not been compelled by Washington to take one man that the forestry organization of Pennsylvania did not feel was the type of man to handle the job.

I understand that we have a number of camp superintendents here, and we have a number of people that would like to discuss this matter in a way that will be interesting, I am sure, to the entire personnel of this organization. Who will be the first one to enter into this very interesting subject?

DISCUSSION

Mr. Pulling, C.C.C. Inspector on the Chequamegon National Forest: If it wouldn't be rank heresy, I would like to ask some of the Washington men if they would give us some of the reasons for professional salaries in the technical overhead. I refer particularly to the discrepancy between the C.C.C. and N.R.A., and also the fact that there is no distinction between extremely recent graduates and experienced men. Mr. Granger said he would be very glad to discuss it.

Mr. Granger: When the E.C.W. work was inaugurated, the question of what to pay the supervisory personnel came up first. We had a meeting of Regional Foresters in Washington at the time, and worked up a scale of pay which we considered as closely allied as we could make it with the rates of pay which were being used in the Forest Service at that time on work of a similar character. We also fixed the rate for professional workers at what we would pay under Civil Service appointment. Then we took this scale up with the Director of E.C.W., and recommended its adoption. He took

the position that it looked too high; this was a relief measure—the enrolled men were getting not a wage but, in the language of Congress, a cash allowance and therefore that the scale of pay for the supervisory personnel should be based not on the full, going wages, but on a modification of such rates, which would be more nearly in conformity with the relief aspect. So we adjusted our whole scale downward, but for the professional men still stuck to the Civil Service rates.

After that schedule was battered back and forth between the Director of the Budget and the White House, it was finally approved, but only after we were required to list the exact number of positions. So then finally they gave us a frozen set-up. We sent that out to the field with instructions that the rates could not go above these figures, but that if in any case they wished to lower the rates in conformity with what they were paying for work of a similar character that was permissible. In some of the eastern states, I know, the state foresters preferred to lower the rates because they

would be entirely inconsistent with what the men of the executive staff were receiving under their own appropriations.

We got along pretty well, and then in came the Public Works Fund, a considerable slice of which was given the Forest Service. Along with that there was established two scales of labor, one common, at 40 to 50 cents an hour, and the other, skilled labor, at \$1.00 to \$1.20 an hour, depending upon the zone. Taking the skilled labor rates as a basis, it was felt for the Forest Service that it was necessary to establish rates for the supervisory personnel which would place them on a reasonable balance with the men who were doing skilled labor. We immediately recognized the difficulties that might ensue, and tried our very best to have the rates raised at that time, but with no success.

Then here recently came the Civil Work program, which set out the same rates of pay for labor, skilled and unskilled, as the Public Works Administration had adopted, with the proviso that where local rates established by agreement between labor and contractor, or labor and some other authority, were higher, a higher rate might be paid; but they insisted that the rates of the supervisory personnel should remain low, and they set a maximum figure of \$200.00 a month.

Almost immediately thereafter the President issued an Executive Order which required the emergency agencies having appropriations under which men were employed, to bring about a classification of the salaries being paid, which would bring them into reasonable conformity with the regular classified salary scale in the government service. While there was some doubt in some of our minds as to whether that was intended to apply to the supervisory personnel in our camps, we took the grounds that it did, and we again submitted a very com-

prehensive program of wage readjustment which would have brought the wage rates up to the level of those on Public Works. We held several conferences, and it was held by the Director of Civil Works that his being a relief project, it did not come under that Executive Order, and he was not going to raise his maximum of \$200 a month, so that was out.

Meanwhile we had, before the issuance of this order, again submitted to the Director of E.C.W. a recommendation that we should not be governed by a hard and fast scale, but should be limited only by the total amount of money which it would have cost to hire all the men authorized, and adjust the rates upward within that total fund limit. Going further with the Executive Order, we then received the decision from the man who wrote it that it did not apply to foremen, superintendents, but to labor, common and skilled, so that put us back to where we were.

Meantime, the Director of the Budget had responded to this request previously submitted for authority to revise the E.C.W. by reiterating the position which he had taken from the start; that E.C.W. is an emergency relief program, and the scale of wages for the supervisory personnel should be fixed on that basis, and if we were losing superintendents and foremen, who were going into private employ because of the low scale of pay they were receiving, that was just exactly what the Administration wanted to happen. That went over to the White House and I think the President O. K.'d it and sent it back. That closed us up on that side. That is where we stand today. We know that this discrepancy exists, and we have tried repeatedly to adjust it, and if anyone can think of anything more that can be done, we are ready to try again.

Mr. Staley: Does that answer your question? Pennsylvania is one of the states that is not paying the maximum

rate set up by the federal government, and for the very reason which Mr. Granger has already given you; that is, that our organization, the Pennsylvania Department of Forests and Waters, would have been very much insulted had we paid the rates that were set up by Washington. I think that was the only thing that we could do. Of course, as time went on there were many applications for these higher rates, particularly because the federal Forest Service in the northern part of the state was paying the specified rates and the Pennsylvania Forest Service was not paying the rate set up.

Mr. Newins, Michigan State Forest School: I would like to bring out one or two points. In the Lake States Region the work that has been conducted in these camps has been of a considerably technical nature, and with some consideration as to the future. In speaking of Michigan, there are 59 winter camps in that State; 32 state camps which clear through Lansing, and 8 camps which clear through Indiana, being park camps, coming under the Department of the Interior. During the summer there were only 2 or 3 of those camps in Michigan. Then there are some 19 camps on the national forests in Michigan. I cite these conditions in Michigan so that you might get a picture of the Lake States Region which hasn't been developed. In these camps, state camps, there has been a very thorough analysis made of the projects on which these men are working. Every man that goes out on a project is listed. There is no man hour that is utilized without its being listed. We have been criticized in Michigan for having too many forms. We have used only one or two men per camp of 200 to complete these camp records, outside of the supervisory personnel. Now we have listed a complete total for the year 1933 of all of the gross man-hours consumed on each project. We have in addition to

that a complete total of the number of hours of effective work. We have a complete total of the cost of the supervisory personnel. We have the cost rated per man for the entire list of projects. We have all the overhead cost—the amount of grease for trucks, gas, and the like. I don't want to bring this out as a matter of defense, but to show that we do have something specific in the way of data about these C.C.C. camps.

Mr. Larson, Ames, Iowa: I would like to know what stand the Society is going to take on the question of curtailment or enlargement of this C.C.C. or C.W.A. work in the future.

Mr. Staley: Is there anyone here who can answer that?

Dr. Schmitz: The Chairman of the Resolutions Committee will prepare a resolution for the consideration of the Society.

Dr. C. F. Korstian, North Carolina: There is one point to which Nelson Brown alluded that I should like to emphasize with just a word or two, and that is the idea of informing the people in the locality where the work is being done, particularly the C.C.C. work, of just what is going on from the standpoint of helping them understand what is being done. I think we foresters are in duty bound to take advantage of every opportunity, and when we are asked to speak before luncheon clubs or various organizations on this program, whether we ourselves are engaged in it or not, we should do so. And we should also carry the word in such a way that the people back home who, after all, put the ideas in the heads of Congress—politicians, members of state legislatures—who in the end are the ones who provide the funds for federal and state programs, can understand and really get an accurate picture of the work that is going on.

Mr. Collingwood, American Forestry Association, Washington, D. C.: If you

will pardon me for more or less blowing the horn of the American Forestry Association, I would like to remark that that which Mr. Korstian spoke of is exactly what the American Forestry Association is trying to do each month through "American Forests." Not only have there appeared during the past several months some informative articles by men, including Nelson Brown and others, but beginning with the December issue, there have appeared personal statements by the boys themselves who are enrolled in the camps, continued through in the January and February issues, with letters from these boys, which I think are among the most amazing human documents that have been published in any magazine. Now we hope naturally that those statements can get beyond the usual members of the American Forestry Association and the usual readers of "American Forests" to the people throughout the country who are wondering what the C.C.C. is doing.

Mr. Staley: What other questions do we have?

Mr. Shirley Allen, Michigan: Apropos of what has just been said about getting the word of the work that these camps are doing over to the public, I should like to have discussed for a moment, if the members of the Society have suggestions, some suggestions as to how the public may be impressed with the fact that there is work being done in these camps. I am not trying to be funny. I have had occasion upon request to talk to a good many groups about the camps, and I have talked to a great many people of influence, and it seems to me that there is a studied propaganda to belittle the importance of the work that is being done and to over-emphasize the feeding, clothing and babying of these boys. I am perfectly sincere in that, and I have a feeling that the forestry profession has

the responsibility to convince the public that there is productive work being done by these camps. I don't know whether you realize it or not, but the general public is not impressed by the work that is being done. If you don't believe it, read the story of the boy in "American Forests" who tells what the C.C.C. has done for him. Read the comments of men of influence and see how often they say, "Of course the work is not important." I have a very strong feeling that it is up to the forestry profession to correct that impression.

Mr. P. A. Herbert: Is there any particular class that happens to be spreading those rumors?

Mr. Allen: The army is one of them.

Mr. Skellenger, Nobino Camp, Minnesota: May I partially answer your question, Mr. Allen? I think that it lies entirely with the men in the Forest Service to eagerly and vigorously push their pencils, put in a little extra time and write articles as to the work accomplished by these camps. Get this information to the public by newspapers; that is the only method that I can see whereby much can be accomplished in that direction. Fortunately or otherwise, I have recently had an article accepted by an international paper outlining some of the work and the equipment in the camp, and I have received some very constructive criticisms on that article. I feel absolutely that the only way it can be handled is for the technical men in the camps to submit articles to the foresters, the supervisors, I should say, and have them pass on those articles before they are shot into the newspapers. However, I did have this article turned down by quite a few newspapers.

Mr. Allen: I am not surprised, on account of what the newspapers consider news.

SUBJECT: PUBLIC FORESTRY ACQUISITION

Chairman: S. N. Spring, Dean, New York State College of Forestry, Syracuse, New York.

Principal Speaker: L. F. Kneipp, Assistant Forester, U. S. Forest Service.

Discussion Leader: P. A. Herbert, Professor of Forestry, Michigan State College.

The Chairman introduced Mr. Kneipp, who presented the following paper:

THE FUTURE FOREST LAND ACQUISITION POLICY OF
THE FEDERAL GOVERNMENT

By L. F. KNEIPP

Assistant Forester, U. S. Forest Service

WHAT I am submitting to you is not a definite and determined program of action, but rather a picture of the possibilities of action. No one can safely predict how far Congress will be prepared to go in giving reality to a proposal of such magnitude. It may, however, safely be asserted that Congress is prepared to go farther now than it would have been a few years ago. The full scope of the proposal may never be attained, or it may not be attained during the present generation, but unquestionably measurable progress can be anticipated as soon as the financial horizons clear sufficiently to permit of the necessary appropriations of public funds. During the past year, forests and forestry have been so thoroughly justified in the public mind that no attitude other than one of favor and support seems probable.

The situation as it exists today leaves no room for doubt as to the necessity for constructive public action in forest conservation. Notwithstanding a temporary surplus of stumpage in the Pacific Northwest, California, and north Idaho, the fact remains that the growing stock which

should supply our sawtimber needs a quarter or half century hence apparently is markedly deficient in both volume and quality. That fact is in itself a sufficient justification for the practice of intensive forestry beyond any limits hitherto attained.

But the factor of streamflow protection is also growing markedly in importance. Not only must our water resources be stabilized so as to fully realize their use for transportation, hydroelectric power production, and irrigation, but they also must be conserved to meet the needs of increasing populations. Many metropolitan areas are concerned over the adequacy of their water supplies. Torrential and unseasonable run-off must be changed to stabilized flows bearing the irreducible minimum of sediment and all evidence available indicates that forests are prime agencies in attaining that result.

The menace of soil erosion annually assumes increased and more alarming proportions. Not only is a precious heritage of productive top soil slowly moving into less usable forms and locations, but river channels, reservoirs and other engi-

neering works, and fertile farmlands at lower elevations gradually are being depreciated by deposits of sediment for which there are no practicable means of removal. If this condition continues, the fine civilizations that have been built up in many parts of the country through the use of water in one form or another largely will die and disappear.

In planning future programs of public forest land ownership and management, the factor of timber production will be neither exclusive nor predominant. As objectives of future social progress and economic welfare, the protection of watersheds with major influence on streamflow and the retardation or stoppage of serious soil erosion generally will be codominant with the objective of timber production and often of paramount importance. Watershed damage or the sedimentation of navigable channels, reservoirs and other engineering works and of highly productive farmlands more often than not are widely interstate in their consequences and thus may create a greater need for federal action than that which rests exclusively upon the provision of future timber supply.

Other somewhat secondary services of the forest such as the preservation of esthetic and scenic values, the provision of adequate opportunity for constructive forms of outdoor recreation and the maintenance of habitats essential to the perpetuation of wild-life resources also are assuming a new importance. With the wide-spread and tremendous increase in interstate travel, brought about by extensive ownership of motor vehicles, by cheap and effective air transportation, and by other means, these social services of the forests also have taken on an interstate significance. A man living in Iowa or Nebraska may have a very direct and personal interest in what is happening to the forests of Wyoming or Oregon, since they may be essential to his happiness and well-being in almost as great mea-

sure as though they were located within his own state.

Dispassionate analysis of current conditions of forest ownership and management makes it strikingly obvious that private forestry will not adequately serve these various requirements of social and economic welfare, unless private landowners are generously subsidized by public assumption of all costs of protection, special tax exemptions or reductions, larger payments for timber products, opportunities to refinance through use of public credit or perhaps even certain forms of bonus or other financial compensation.

If the American people largely must bear the costs of proper methods of forest management, there is no logical reason why they should do so in ways which permit private owners of forests to reap practically all of the accruing benefits and yet conduct their operations under conditions which afford the American people inadequate or no guarantees that their interests will be fully safeguarded and their desires fully met. If the public largely must pay the bill, why should it not assume direct control over the forest resources, thus gaining positive assurance that its needs will be served and its future safeguarded, and thus creating conditions under which financial returns due in large measure to public action and public expenditures will accrue to the public rather than to a relatively small number of forest landowners?

Accepting the premise that public action is logical and desirable, there instantly arises the question as to whether such action could be through state or federal agencies. There are logical arguments to support either point of view. Enlargement of federal forest land ownership and management within a given state necessarily means surrender by that state of some part of its sovereign power over the lands within its borders. Assignment to any state of large sums of

money from the federal treasury for the acquisition, improvement, protection, and administration of large areas of forest land means some surrender by the taxpayers of the Nation of adequate control over the use and consequences of taxes paid largely by the citizens of states other than those to which the federal funds may be allotted.

More than one state forester or other state conservation official frankly has expressed the opinion that the federal program of forest land ownership and management in his state should not be of larger proportions nor advance faster than the state program. In states unwilling or unable to establish programs of forest-land management commensurate with evident needs, this policy would mean a condition of utter stagnation and complete disregard of the best economic and social interests of both the state and the Nation. However, no such state of affairs is ever proposed, but the solution offered is the advance to the state of federal funds sufficient to finance the acquisition, development, and management of a satisfactory system of state forests.

It is obvious beyond question that any state containing forest lands within its borders should enjoy the fullest possible latitude in the creation and maintenance of a sufficient system of state forests, provided it is willing to finance the cost thereof from its own resources. No obstacle to such action should be created or sanctioned by the federal government. But if federal funds are to be the major means for establishing the necessary system of public forests, why should not such funds be expended by or under the direct control of the federal government rather than through the states?

The largest share of federal taxes comes from heavily populated states in which systems of public forests have been or are being established at state expense, or in which there is the least probability of extensive systems of public forests. The

major part of the federal money for the purchase and management of forest lands would be expendable in states contributing relatively small parts of the federal income. The willingness of the taxpayers of the Nation to pay the large costs of an adequate system of public forests, except under conditions guaranteeing them some direct and definite voice in the management and control of such forests, is extremely debatable. Then, too, states suffer more frequent political changes and administrative and financial policies are accordingly much more mutable than the federal policies. Two dozen relatively uncoordinated and frequently modified state programs of forest conservation offer much less promise of stability and effectiveness than a single federal policy not subject to frequent financial and political mutations.

A realistic analysis of all factors and circumstances creates no ground for the assumption that a policy of state forest ownership and management financed largely from federal funds would be as permanent and enduring or as responsive to collective national needs and desires, or as fully effective and economical as a single unified system under direct federal management and ownership. It is at least debatable whether insistence upon such a policy would have any effect other than to confuse public thought and complicate the courses of action otherwise practicable of accomplishment.

During the past few months the Forest Service has gradually been assembling data relating to the watersheds of major influence and the areas subject to serious forms of soil erosion. These data have been collected from every available source and represent the most authentic determinations of the several subjects which are now available. They not only have been tabulated but they have been superimposed upon maps with a view to forming a graphic picture of conditions as they exist today in the United States.

These maps are available for inspection by those present at this meeting.

There are four types of land for which the maintenance of adequate forest covers seems to be dictated by all social and economic considerations. Discussion of these types is confined to the natural range of tree growth and does not include treeless areas of the central West.

From the point of view of future needs, the areas of most critical importance are those which are both of major watershed influence and subject to serious soil erosion. These areas are colored in green on the accompanying maps and represent a gross area of approximately 162,774,000 acres. Of course, not all of the land within the zones thus colored is of the character indicated, the classification merely indicating the paramount condition.

The second category embraces lands which are of major watershed influence but upon which soil erosion is of less serious extent or consequence. This classification represents an additional acreage of 276,215,000 acres. The desirability of maintaining this land in optimum condition for the absorption and gradual release of precipitation dictates extensive acreages of forests as one of the best agencies to that end.

The third category embraces lands of less than major watershed influence but upon which the Bureau of Chemistry and Soils has found soil erosion to be widespread and serious. Recognizing the numerous exceptions which exist, this class of land through the slow attrition of the elements gradually is losing its social and economic potentialities to a degree which eventually will demand constructive public action of large extent and great cost. Lands in this class approximate 119,427,000 acres.

Then there is a fourth category of lands, the lands not in the three preceding classes, which largely are submarginal for farm-crop production and for which some oth-

er economic and social use is dictated by all considerations of public welfare. In the studies made by the Forest Service this submarginal land has been divided into two classes, the first comprising the areas 75 per cent to 100 per cent submarginal amounting to 256,958,000 acres; the second, the areas from 50 per cent to 75 per cent submarginal which approximate 77,706,000 acres. Submarginality is established by a number of different causes, including comparative sterility of the soil, adverse climatic conditions, remoteness from consuming centers, etc. Regardless of the specific cause experience has indicated that upon such lands attempts at farm-crop production not only cause a tremendous wastage of human effort and human hopes but also react adversely against the sound economic development of permanent agriculture and thus create a general condition of insecurity in the primary industry of the Nation.

National interest dictates that the areas of major watershed influence and most serious erosion must be impressed with forms of service which may militate against the highest and most remunerative types of intensive silvicultural management. That is, with stabilization of streamflow or fixation of soil as a major objective the tree species comprising the forests may not be those yielding the highest values in timber products, or the principles of timber use may necessarily be different from those under which the largest economic returns would be obtainable. For these reasons the private management of such types of forest soil, in ways fully meeting national requirements, seems least probable and even the states with limited financial resources may find state management of such forest types difficult if not impracticable. For these reasons such lands seem to be the peculiar problem and obligation of the federal government, particularly since the consequences of their management ramify

widely and assume interstate or in some instances wholly national proportions.

When one enters the zone of submarginal farmlands, conditions for state or private action become relatively more favorable yet even here the element of forest soils and forest site quality is a major one. But federal forestry should not be confined exclusively to the inferior or exceptionally difficult types of forest soils. Need exists also for federal ownership and management of some minor proportion of the better forest types so as to permit full realization of the potentialities of research, practical experimentation and large-scale demonstration of the best forest practices.

The National Forest Reservation Commission has expressed the desire for a complete picture of the ultimate national forest program so that the apparent needs of one state could be weighed against those of another and some balance maintained in the federal program between state and state. To accomplish that objective some broad basic principle must be developed. Merely as a point of departure and subject of discussion leading to sound ultimate conclusions the following basic principle is tentatively suggested. The proportions given are inclusive of the lands already in federal ownership.

Within the areas combining major watershed influence and most serious soil erosion, the federal ownership ultimately should comprise 75 per cent of that part of the area for which forestry is the highest economic use and which is practicable of administration as national forests.

Within the additional area of major watershed influence with less severe erosion, federal ownership ultimately should be 50 per cent of the forest area susceptible of efficient and economical public management.

Within the further additional areas of serious soil erosion but less than major

watershed influence federal ownership eventually should amount to 25 per cent of the part thereof which should be in forests and can be publicly managed for such purposes.

This brings us down to the more productive types of soil, of large value for timber production but submarginal for agriculture; lands offering the widest opportunity for private or state forestry. The desirability of an adequate representation of such types within the national forest system seems obvious. As a guide to action, it is suggested that federal ownership of areas predominantly of this type should not within any state exceed ten per cent of the forest area of the state. Thus, 90 per cent of the better forest land would be available for private and state action.

The foregoing deals largely with land management—through the agency of forests. But mere acquisition of land is not in itself a solution of any appreciable part of the problem. On the contrary it enlarges the obligation of forest management. Unless optimum forests promptly are established on the lands, their federal ownership will fail in its purpose and objective.

When the acquisition program was initiated, we had high hopes and limited funds: hopes that private forestry would become the established practice over the major part of the forest lands; funds that suffered from the competition of other more aggressively presented demands upon the federal treasury. In consequence, the policy followed was first to give initial attention to the areas where proper management by other agencies was least probable, and second, to spread the available money over the largest possible acreage so that the federal effort would have greatest influence and significance. Watershed protection was the dominant purpose and for that purpose a large area densely stocked with soil binding and water absorbing young growth might

be more important than a small area of mature or semi-mature timber of high commercial quality. The policy has been repeatedly criticised, but was in complete accord with the basic purpose of the program. Furthermore, the acquired lands were by no means exclusively of inferior site quality nor devoid of forest values. On the contrary they comprised much of the better, if not the best, forest soils, and considerable volumes of timber of merchantable sizes and qualities. The present system of purchase areas needs no apologies.

But if the Nation attacks the forest problem in a realistic way and is willing to make available sums adequate to its satisfactory solution, one of its major objectives must be the acquisition of a sufficient forest capital to allow the application of the best principles of forest management. It should plan to buy not only land but the means through which the growing power of the land most fully can be realized; or in other words, stands of timber in various stages of economic maturity; stands full, three-fourths, three-fifths, half, two-fifths mature, as well as areas supporting only seedlings and saplings or offering nothing except a good planting chance. It must pay more for such lands, and if its funds are limited it must be content with less than the maximum attainable acreage, but the purchase of a reasonable proportion of well advanced stands frequently can be justified both from the standpoint of maximum social service and maximum financial return. The crux of this point of policy is whether the welfare of the Na-

tion is best served by arresting destructive action on large areas or in promoting constructive action on lesser areas.

Still another phase of the problem awaits final solution, and that is the extent to which the Nation should acquire and hold, somewhat in reserve, the volumes of privately-owned mature timber which in certain regions are greatly in excess of current and immediately prospective requirements. The passage of such timber to private ownership was a grave error of government, disastrous in its consequences. Its only result has been a process of liquidation, destructive not only of the forest values on the particular lands but also of those on other widely remote lands. A quarter or half century from now that timber will be urgently needed; at present its uneconomic utilization creates a condition approaching chaos throughout the entire lumber industry. The discriminating purchase of say fifty to one hundred billion feet of such currently surplus timber by the federal government not only would conserve its social and economic potentialities but would do much to stabilize and stimulate forest management throughout the greater part of the Nation and markedly improve the entire forest situation.

Mr. Spring: We have just had an extremely interesting paper, and as I turn to the program and look at it I see that the leader for the discussion is Mr. Question Mark! However, Professor Herbert is going to fill the bill, and I am very happy to introduce to you Professor Herbert, who will lead the discussion.

COMMENTS

By PAUL A. HERBERT

Department of Forestry, Michigan State College

LAST week I received a copy of Mr. Tinker's paper and was told that I was supposed to comment on that; then this morning I was told that

I should comment on Mr. Kneipp's paper instead. I am supposed to be a little more liberal than Mr. Kneipp, so it is going to be rather hard, especially after

listening to what I consider the most reactionary sessions of the Society that I have ever attended.

I am going to start in on the basis of my professorial prerogative and try to give you a few axioms. An axiom, I believe, is a truth that cannot be denied.

First; why are we here in this world anyway? I suppose we are here to have a good time, as good a time as we can, as long as we don't tread on someone else's toes. We are supposed to leave this world in as good a condition as we found it. If you will accept those two statements you must admit that we have been living in a selfish, barbaric age; an age when Henry Ford, who speaks for many, can calmly state that he will throw out of employment hundreds of thousands of men if he doesn't agree with the N.R.A.; when individuals can do as they please with our natural resources, when it is upon those resources that our future generations depend. Oh, you say, that is private property; the man can do as he pleases with it. As Mr. Watson said yesterday, Mr. McCallum had to squeeze every last cent out of that 80 acres he sold so that the stockholders in New York could get their dividends. I am a little reluctant to admit that there is any such thing as absolute ownership of our resources, or even any of our wealth. The laws of society have made it possible for individuals to accumulate large or small amounts of these natural resources. It seems to me just as logical that society can change its laws, can alter them. I am somewhat reluctant to suggest that society may in the near future change its laws to such an extent that it will eliminate all accumulations of private wealth, but I believe I am going to live to see the day when millionaires will only be found in the dictionary, and when such men as the Mayor of Milwaukee spoke about today—receiving \$82,000—will be glad to labor just as hard for \$5,000 or

\$10,000 a year. Our public officials are doing it for that, and they are doing a mighty good job.

I think the time is coming when we won't call people "owners" of property at all; we will call them "custodians" of our wealth, and if we find it desirable to practice some type of conservation, some type of forestry on any or all of our lands if society decides that it is desirable it will simply change its laws and possibly appoint a few custodians, who might be public officials, and it isn't absolutely necessary that the former custodian be reimbursed. He may suffer for the good of society as a whole. Possibly he might not really be entitled to reimbursement.

Mr. Kneipp brings in, for instance, the fact that we should buy back all these millions of feet of timber. Now as a liberal Rotarian I would simply raise the question whether possibly those custodians were given too large a share to begin with. Society may have made a mistake and in correcting that mistake I don't believe those custodians are going to starve to death, or be hampered in living a wholesome, happy contented life.

I agree with Mr. Kneipp, but on the basis of what I have said you probably realize I don't think he has gone far enough. History, as you know, is a very dangerous thing. History, tradition and legal precedent—I think we would be far better off if we didn't have them, because we look back instead of forward. It is especially true of legal precedent.

I am thinking of history now in conjunction with the Weeks Law. It seems, as I remember it, the Weeks Law allowed the government to purchase lands only on navigable streams. Then as that was accepted and as the Forest Service began to feel that the public was inclined to go a little further, we got the Clarke-McNary Law, and they were allowed to purchase land elsewhere. You might say, "Well,

we sometimes wonder whether those things are Constitutional, whether it isn't going too far." Remember the Constitution was written by people years and years ago, and there is no reason under the sun why it can't be changed. So it seems to me that Mr. Kneipp's suggestion is an excellent one.

Let's start here and now with his proposition of taking over a great area of this land that is eroded. I think after we have adopted that policy then we will come to another Clarke-McNary Law and go considerably further. For instance, in Michigan—by the way, Mr. Kneipp speaks of a sovereign state surrendering some of its rights. The State of Michigan today, if it hadn't been for the federal government stepping in last winter and supporting a great number of people in the state, particularly in Detroit, would have gone to pieces. The states today are receiving huge subsidies from the government and our state boundaries again are a matter of history and precedent. I will make the prediction that by the year 2000 a great many of these state boundaries will not be where they are today. We will probably have a State of Chicago, a State of the City of New York, a State of Detroit. That is undoubtedly what is coming. There is no rhyme or reason to this state set up. There is no reason why it should continue. It isn't economical, it isn't logical.

This will be my last point: You will notice that in the State of Michigan particularly the federal government is going to purchase practically no land. Why? Because we have very little in the way of eroded watersheds, etc. We have a considerable area of sub-marginal land in

Michigan, and a little of the erosion, but no great amount. Under this set-up there would be practically no land acquired in Michigan by the federal government except, as Mr. Kneipp pointed out, demonstration areas. The people in the cities of Chicago and Detroit pay huge taxes to support the federal government. Because of this set-up the people in these two cities will either have to depend on private ownership for their forest products, or they will have to transport it here from the South. I don't see any particular reason why those folks should have to pay all those taxes so the people in the East can have government timber. What we are really interested in is cheap timber, and the cheapest recreational possibilities for everyone to enjoy. You can find the same picture true in Minnesota and Wisconsin.

I haven't said very much, but I want to leave this thought with the younger man particularly. Dr. Zon told me something that was very discouraging and somewhat annoying. I was going to tell you what it was but I can't. There has been some question as to the leadership of the forest schools in creating leaders among the younger men coming out into the profession. I pointed out that on the program at these two meetings practically everyone had completed his college education 20 or more years ago. For the next years this is going to be an administration of young men. I want you younger men to get into this Society and make it go. The younger men are more socially minded than the older men, and I want to tell you that about 80 per cent of the men coming out of our colleges are similarly minded and going to take it up, and they will go far.

DISCUSSION

Professor Hosmer: There is one question of detail. Some of us have been unable to find out just what the Forest

Service policy is as to the acquisition of additional tracts for national forests, especially the filling up of the original

purchase areas established under the Weeks Law as against new national forests in the South, Lake States and elsewhere in the country. One of course admits that the Forest Service must play a waiting game and there are very good reasons why the new purchase units should be established. But in 1920 the report of the National Forest Reservation Commission showed maps in which only about half the established purchase units had been completed. The latest maps I have seen were not materially different from the 1920 maps, and I am wondering why. As money becomes available, by appropriation or under the President's action, what is the policy of the Forest Service about completing the purchase areas originally set up as against setting up new forests in other regions?

Mr. Kneipp: The policy of the Forest Service is not to go into any state except with the consent of that state. The policy also is not to exercise its right of eminent domain or condemnation but to buy only as offered freely and voluntarily by the owners. In the old units we will not buy land at a higher price than can be justified. In the old units we are hampered by the unwillingness of certain owners to sell land at all or by the unwillingness of other owners to sell land at prices we had thought to be justified. As that condition became more and more acute, we decided that we would rather establish units in other regions than go in and exercise the right of eminent domain or our condemnation rights in the older units.

The President first proposed to make the money available through the Forest Service for expenditure to be confined to the already established 48 units. The first executive order of May 20 and the second order of June 9 both provided to that effect; that is, that the \$20,000,000 be confined to the completion of the present 48 units. It was our feeling that

we should take advantage of the opportunity to make the units established complete, and no new units should be considered. However, very effective opposition arose to that order. It was represented in a convincing way that there were other areas in the United States in need of federal action and that it would be an injustice to deny them recognition. Under the third executive order involving the same \$20,000,000, the policy was modified to extend the expenditure of the money to such new units as may be approved by the Secretary of Agriculture and the National Forest Reservation Commission. Our desire was to consolidate each unit as rapidly as possible but not to do it against the wishes of owners or by unwarranted expense to the public treasury. The alternative was to establish new units. That is the definite policy which is in effect, although not reduced to writing.

Professor Hosmer: It was difficult to ascertain from the publications of the Forest Service whether there was such a policy.

Out of the new \$20,000,000, are any areas being acquired west of the Great Plains?

Mr. Kneipp: The policy of the Commission has been to confine expenditures east of the Great Plains. The total forest area west of the Great Plains is 24 per cent of the forest area of the United States. Approximately 95 per cent of the national forest area is west of the Great Plains and 5 per cent east.

Professor Hosmer: I understand that the late Major Stuart had hoped that this project would be pushed into the West.

Mr. Kneipp: He did so hope but never carried his hopes into action for fear it would complicate the plan in the East which appeared more necessary. From the standpoint of good social economy the plan to purchase in the East has much to commend it. The great majority

of navigable streams have their source there, the greater part of the population is there and the services of the forest are by far more needed. The federal government at present has a very negligible ownership of forest areas in the East.

Dr. Schmitz: I wonder what Mr. Kneipp's answer to Professor Herbert's criticism of this acquisition program is, namely, that Chicago and Detroit are entitled to forests for recreational purposes.

Mr. Kneipp: It has always been the feeling of the Forest Service that areas primarily for recreation are local obligations rather than federal. It is perfectly proper to feature recreational use as a by-product of national forests established for other purposes but not proper to purchase areas primarily to produce an outlet for recreation.

Dr. Schmitz: The Copeland Report suggested 34,000,000 acres of national forests purchased for recreational areas alone. I do not know whether the idea was accepted but there appears a strong possibility that ultimately it may be. The present objectives to supply needs for fire control, watershed control, timber production, recreation are recognized but are not defined for any definite section of the United States.

Professor Spring: A few of us are anxious at present because of young men making mistakes as a previous generation did. As we grow older we fit our philosophies and come to our conclusions as to the most sensible and wise procedure. But when one becomes head of an educational institution and has worked for years in an institution, the fundamental thing is to get the students to think and to think straight through to the end of a question. Herbert has been doing that. Whether we agree with his thoughts, at least we agree they are original, sincere and that they represent one point of view.

Whether or not we subscribe to the ideas as presented by the discussion leader is immaterial but I will say that of all the institutions that I know of and the men at the head of them, their objective is to teach the student to think for himself, to dig up data for himself and to develop an independence with which to cope with problems of life which are all theoretical at the start. With a foundation of sound thinking he can proceed to work. Tomorrow is largely for the younger men to proceed and not sit back because older men are above them in service or positions in life or other respects. Their own efficiency depends on the effectiveness with which they participate in live issues.

Mr. Granger: Following up the question of younger men I want to say under this plan as originally prepared, the one who was to have presented the paper and the one who was to have led the discussion, were both so busy running the country in Washington that they could not come out and talk about it. I want to tell the meeting that we are making some progress. In previous meetings the men invited to lead the discussions by the main speakers have shown ignorance of the papers. At this meeting, two out of five have given some recognition to the fact that a paper was read and another had been asked to discuss it.

I feel highly gratified at the success of the meeting. Whether there will be too much reaction does not concern me. I was one of a lot of exponents for holding the meeting in the Lake States. I talked long and hard in favor of the plan. We have had a meeting and a good one. We have had a lot of tremendously worthwhile discussions. I want particularly to comment on the fine attendance¹ here on the part of our lumbermen friends who have taken a leading part in the discussion. While foresters and lumbermen

¹The registration of members and guests totalled over 250.

may have lots of arguments yet, each year we are getting closer together on a common objective of making trees grow on land where they are supposed to grow. The acquisition program was the last part of the meeting. The meeting tomorrow will be for members of the Society to afford opportunity to discuss business matters, take up questions of policy and actual operation of the Society, a number of which are very live and very important. I hope that every member of the

Society will stay over and show up on time so that we may start early.

I also want to say there will be every opportunity for everyone in the younger group in our membership to say whatever he wants whether in praise or criticism. We want advice on a number of things concerning Society administration. You will hear from our newly elected president who will have very important things to say to you.

MORNING SESSION, DECEMBER 30, 1933¹

SUBJECT: SOCIETY AFFAIRS

Chairman: C. M. Granger, President.

ADDRESS OF PRESIDENT GRANGER

ONE of the most striking things in the affairs of the forestry profession during the last few years has been the remarkable holding up of membership in the Society. When Mr. Redington left office two years ago, he set a goal for the Society to attain during the next few years of 3,000 members. We then had something less than 2,000. Up till that time I think perhaps no one realized the full effects of the depression on foresters, the extent to which so many of them were out of jobs or had suffered such sharp reductions in their incomes that they felt great difficulty in continuing to pay dues in organizations, including ours. One of the things most impressive to me is the character of the letters which we had from men who had slipped badly financially in which they stated that one of the things which they had struggled to keep up was membership in the Society.

But we realized that the job of getting many new members was a big one and that the depression was working against

us. However, we appealed to the sections, to the forest schools, to individuals, and to the membership at large to work for the building up of the Society, adopting the policy of attack rather than defense. Despite the suffering in our ranks because of the depression, even before the tremendous beneficial effects of the emergency work in restoring foresters to the payroll was felt, we were still holding our own. In the last two years, instead of having a decline, we have increased from 1,894 to approximately 2,013 members, which I think is a fine record. That record is due not only to the work done by those in the sections who were chiefly responsible for the new membership job but also to the individual work of our members.

We have gone along for several years now with a regular staff; that is, an executive force in Washington which is employed to look out for the business affairs of the Society and provide those services to the members which the So-

¹Something over 50 Society Members in Attendance.

ciety can render. Many times some of us have wondered whether we were going to make the grade financially, and I want to pay the highest tribute to the executive staff for the many ways in which they have found to effect economies in our expenses. Each year the Council has approved a budget, cut to the quick, and each year the executive staff has come substantially under the budget, and has found ways to increase income, so that we have been coming steadily closer to the time when the staff can be maintained without any special contributions from the members. We think that we have now definitely reached that point.

There has been a good deal said about lack of leadership in forestry. There has been said to be a feeling of confusion on the part of foresters as to what we should do. Seemingly some of the economic theories on which former forestry policies and plans were built have tottered and fallen and have left foresters with a feeling of uncertainty. This was especially true a year or two ago. Of late there has been quite an outflow of very definite criticism of lack of leadership. I have been trying to analyze that and I think we are safe in vigorously denying that there has been lack of leadership for foresters and for the public in those things in which foresters are expected to lead. If we go back to the very beginning of forestry development in this country—the creation of the national forests, the upbuilding of co-operation in state forestry work, the creation of fire protection organization among private owners, we find that every single one of these projects has been led by a forester or a group of foresters. In matters of more recent development, such as revision of the taxation laws affecting forest lands, we find that foresters have forced upon the industry a realization that something should and could be done toward specific readjust-

ments of the tax laws,—this despite a recent statement by one of our members that the industry has shown much greater leadership than foresters. This is illustrated by the situation in Oregon, which has one of the best recently-adopted forest tax laws. There it was necessary to overcome a tremendous lethargy on the part of the lumber industry before this legislation was passed. One can point out similar examples in a number of other places in this country. In the province of game management, Aldo Leopold, a forester, has been the leading exponent, not only as to forest lands but all over the country. In the matter of forestry legislation both local and national, the foresters have led. The Clarke-McNary Act bears the names of members of Congress but it was conceived and developed by foresters. The McSweeney-McNary Act, the basic legislation on which federal forest research rests, was conceived and put through by foresters. Undoubtedly there are countless examples of the same sort in state legislation. Many foresters have been called to help the lumber industry out of its difficulties. The industry has found in the ranks of foresters men who command public confidence in addition to having the ability the industry has been seeking, particularly in these trying times. In land use planning, foresters have frequently stolen the show from economists in that field. The Copeland Report, which starts a new era in forest policies and plans, is due to the leadership of foresters. And, most recent, we have the conservation clause in the lumber code which is a product of the thought and drive of foresters.

I do not recite all this in a spirit of boasting in behalf of the profession, but I dislike to see created in the minds of the younger men coming into the ranks a feeling that we do not have in the organization the leadership that the younger men have a right to expect. The older

men have been living with this sort of thing for a long time and know what to take with a pinch of salt, but the younger man may properly wonder what it is all about. If anyone is critical because he feels the lack of a leader or group of leaders who have outlined a definite and complete plan which everyone may follow, then I say he is chasing a will-o-the-wisp. It is wholly out of reason to expect any large group or all of us as individuals to get back of a large program in all of its details. But there are so many things that need to be done that if those, for example, who are in favor of complete public ownership of the forests will exert all their efforts in that direction we shall still fall short of bringing about the large increase in public forest ownership within a short space of time that the great majority believes to be desirable. Likewise, if those who favor much larger development of private forestry will plug for that, we shall still get along that road more slowly than the majority favor. There are plenty of things to which individuals and groups may direct their support without waiting to bring about a complete coördinated problem behind which the entire profession can be lined up as to all its details.

My judgment is that this cry about lack of leadership arises chiefly from disappointment on the part of some men because the leadership is not going in their direction. As a matter of good faith and to gain proper perspective, let us analyze the situation correctly.

We have for example a recent pronouncement by one of the most thoughtful and brilliant members of our so-called younger generation that almost complete public ownership of forests is our only way to salvation. He points to Europe to prove that this is necessary. We have appearing almost simultaneously an assertion by another forester with a

great deal of experience in Europe that private forestry has been successful in Europe and can be successful in this country, and need not give way so largely to public ownership. We have a third individual who is equally competent by observation to speak on the same subject who throws in with the first view that complete public forestry is necessary and that Europe has proven the failure of private forestry. Foresters are charged with lack of leadership by these men, but isn't it because leaders have not been going far enough in their direction?

It is a good thing to have these challenges because it keeps us looking and listening, but it is not necessary because of these challenges that there should grow up any feeling that we are not constantly being given definite goals toward which we may work. I should like to see us go forward with proper modesty as to our limitations and our record, but with all confidence that there are plenty of things of a forward-looking character to which we may turn our attention without milling around because we think we cannot see the light ahead.

I know you will be interested in the result of the recent election of officers. I want, at this time, to give the names of the members of the Council who have just been elected and then to present to you your newly elected president, who I know has many things to say to you. After that we will get along with the routine business. Unfortunately three of the newly-elected members of the Council could not get here. The fourth you already know—he has already presided over a session at this meeting—Sam Spring, will you take a bow? The other new members of the Council are Emanuel Fritz, Ward Shepard, and F. W. Besley. The newly elected Vice President is Earle Clapp.

The man who has been elected President you know very well. He is a fighter

and would rather fight than do anything else. If nobody else starts a fight, he will go out and incite one of his own. He is incurable, absolutely incorrigible, as many have found out. His incorrigibility is like that of the old lady's parrot. The parrot had a bad bringing-up and swore great oaths, to the good old lady's constant dismay. She asked the former owner of the parrot how the bird might be cured. He told her to take the parrot by the claws every time he swore and whirl him around her head several times. When the old lady got home, the parrot met her with, "For God's sake are you here again?" Sadly but determinedly the old lady seized the bird by the claws, whirled him about vigorously and set him down again on his perch. Whereupon the unsinkable bird ruffled his feathers back in place, shook his head, stuck out his neck and said, "Jesus! What a breeze!"

Fortunately for the profession these fighting proclivities of the new president have taken the form of a never-ending crusade in behalf of foresters as individuals, of foresters as a group, and of the development of forestry in this country. We have every reason to be thankful for him and to congratulate ourselves on his election to the presidency of the Society. Gentlemen, I give you our new President. H. H. Chapman.

President-elect Chapman: Mr. President and gentlemen. I sometimes think that a reputation might be just a little of a handicap. There is this element,—I want to say that the other day I heard something which pleased me more than anything I have heard in a long while. A gentleman told me he was glad I had been elected President because in these troublous times the Society needed a very careful and conservative management. The remarks of the incoming officer and the remarks of the President will doubtless be printed and so I have prepared a pa-

per. While I listened to what Granger said, it did me a lot of good. Perhaps you will see why.

THE FUNCTIONS OF THE SOCIETY OF AMERICAN FORESTERS

Throughout the history of the Society of American Foresters, there has been a chronic condition of dissatisfaction among its members, boiling up in articles in the JOURNAL, talks at meetings and private conversation. This takes various forms, such as criticism of the profession for lack of leadership, which seems to be the leading theme; comments on the dominance of government officials as officers and council, and of management of the Society from Washington, and lack of appreciation of enormous contributions of unpaid time by these same officers in administering the business affairs of the Society and making possible its survival; violent opposition on the part of different groups to measures advocated by opposing groups, such as public ownership versus regulation of private owners; criticism of the JOURNAL for being too technical, or for not being technical enough; questioning the utility of a paid secretary on the basis of no proof of financial gain accruing to the individuals contributing to his support; and so on, ad lib.

We have just passed through an election in which the dominant issue was whether the officers of the Society for the next two years should be Forest Service men or outsiders. The result as far as President and Vice-President was concerned was fifty-fifty. Many of the members had the impression that this was a drive to exclude Forest Service men permanently from the direction of the Society, and some even threatened to withdraw if any such "principle" was established. Articles and letters were published gravely questioning this alleged proposal.

Whatever ideas others may have had on this subject the objective of the writer was primarily to put the Society, during the present critical period, in a better position to strengthen and support the Forest Service in its fight for professional ideals. It was thought that at this time the influence of the Society in national affairs might be stronger if these officers were not also in government positions. The real quarrel was with the blind Hare system of voting for officers by proportional representation.

Since the "new administration" will be the target for the next two years, we not only wish to assure the members that "we can take it," but urge that this habit of free and emphatic expression be given even fuller scope. The time has not come in America when scientists and professional men as well as government officers must alike subscribe to pronouncements handed down by a power whose perpetuation is based on suppression of freedom of the press and of personal opinions.

What are the functions of this Society? I believe there are four principal purposes which it should serve.

In the place of first importance, the Society should seek to encourage every forester in the development of individual achievement. This means that in whatever branch or line of forestry he finds himself, a forester has almost unlimited possibilities of accomplishment if he will devote himself to getting the best out of the opportunities which offer. But he must do it himself. Opportunities vary, but men vary far more. The men we eventually hear of in forestry are not always those favored by preferment, or rapid advance, but those who have taken hold of their jobs and made these jobs the vehicle for real constructive interpretation of the possibilities of forestry in that particular line; and in doing so have grown into capable, broad-minded citizens, able to swing new responsibilities

in a crisis. The result is that when national planning suddenly stampedes theory into the brush and substitutes action, foresters are found able to exercise the needed leadership and direction, nationwide, of such tasks as the C.C.C., the Tennessee Valley Authority, erosion control, huge purchase programs, a colossal plan for coöperative regulation of the private forest lands, not to speak of the protection, taxation and other routine jobs. The field open for progress in forestry is so wide and varied territorially and in the diversity of its objectives that the only hope of substantial accomplishment lies in the solid and enduring work of individuals actuated by sound ideals and tenacity of purpose. The Society should be the clearing house for ideas, the forum for debate and exposition of progress, not only in the technique of forest production and utilization, but in forest economics, policy and management as well. Election to senior membership is a deliberate attempt to recognize all individuals who have come through their period of probation with professional standards intact, and have shown that they have mapped out for themselves the road to professional usefulness. The JOURNAL, the section meetings and as far as possible the annual meeting, give opportunities for the individual to contribute and receive recognition if his efforts or ideas merit the time and space required for their presentation. This ideal of the Society is and has been served, in spite of and even because of the wide variety of views expressed as to policy and objectives.

The aim of the Society which should be given the next place in importance is an outgrowth of the first. This is, the formulation, upholding and occasional disciplinary enforcement of professional standards. The Society cannot itself supply standards capable of raising the profession to its requisite place of honor and

service. Only the individual can do that, and he only by placing service and honorable conduct ahead of security in office or personal gain. But in the scramble for a livelihood, both in public and in private fields, recognition of fair practices, such as now is occupying the attention of industry, is doubly necessary with professions, and where such "codes" are flagrantly violated, the Society is faced with the responsibility, which cannot be exercised elsewhere, of upholding the standards of forestry practice.

In the third place, there is a definite responsibility resting on the Society to extend vigorous support to foresters who because of their adherence to professional standards have suffered or are threatened with loss of occupation or position. So much has been said about this in the last year that it may fairly be assumed that the outcome of the election means a verdict that the society vigorously press this objective.

Finally, how far can and should the Society as such go in advocating forestry policies and legislation, and how far is this apt to be in conflict with the first objective? It seems to me that there are very few public objectives or policies upon which the profession is incapable of passing as to their fundamental soundness or defects. The rest is a matter of relative emphasis, permitting the widest latitude in opinion. Regimentation of ideas through the Society is the last thing we should desire. I should personally object strenuously if the Society endeavored to limit my utterances on the subject of use of fire as a measure for securing reproduction of longleaf pine, for instance: Ward Shepard disagrees with E. C. Richards as to the possibilities of private forestry—is the Society to act as umpire in such a bout? Or shall we decide whether the entire forest acquisition policy outlined in the Copeland report should be put through promptly and

suppress constructive criticism of its proposals? Not in these United States, when there is room for all programs and every effort that can be made, public or private, to accomplish the task ahead. The Society is not by these considerations reduced to a state of impotence and profitless debate. In two fields it should act with vigor and decision, first, where the fundamental interests and welfare of foresters as professional men is threatened, and second, where the public welfare is at stake. If the Society, through its officers and advisors, is unable to recognize such situations when they arise, it may well be subject to the charge of bearing excess baggage in forestry.

H. H. CHAPMAN,
President-Elect.

Mr. Granger: Though the new president does not legally take office until January 1, I should be very glad indeed to turn over the balance of the meeting to him but he prefers that I continue in the chair.

We have an Executive Secretary, who has by his work shown why we set up the office and what can be made of it. In my judgment we have every proof that it was a wise and far-seeing development on the part of the Society. I have a great deal of personal knowledge of the tremendous interest that Franklin Reed has taken in the welfare and development of the organization, and I am very glad indeed to have this chance to publicly express that feeling. All of you through reading the JOURNAL have had a running account of what he is doing and many know by personal contact. I am just going to turn the meeting over to Franklin Reed for a few minutes for whatever he may wish to report or say.

Mr. Franklin Reed: In compliance with Constitutional requirements and with established practice, it is in order to sub-

mit for your consideration three official annual reports: (1) the Secretary-Treasurer's report on the financial status of the Society; (2) the Executive Secretary's report summing up his activities and accomplishments during the past year for the good of the order; (3) the Editor-in-Chief's report covering the past year's work with the JOURNAL OF FORESTRY and plans for the coming year. Since the Secretary-Treasurer was unable to be present and since the duties of the Editor-in-Chief are now combined with the duties of the Executive Secretary, it falls to my lot to submit all three of these reports.

FINANCIAL REPORT

Our Society, during the past three years, has made a remarkable showing. It is the only association within my field of acquaintance which has carried through without loss in membership and without red ink in its budget. On December 1, 1930, our membership totalled 1,740. On December 1, 1933, it totalled 2,013, a net gain of 291 and continues to grow. Our budget for 1933, our actual expenses and receipts for that year and our tentative budget for 1934 are as follows:

Item	1933		1934
	Budget	Actual Expense	Budget
Printing JOURNAL and Index.....	\$ 6,200.00	\$ 6,235.85	\$ 6,200.00
Reprints.....	200.00	163.98	200.00
Editor's Expense.....	75.00	18.00	-----
Rent and Telephone.....	1,165.00	1,165.52	1,120.00
Salaries.....	10,270.00	10,243.32	10,270.00
Miscellaneous Printing.....	100.00	40.50	75.00
Office Supplies.....	95.00	161.85	150.00
Multigraph and Mimeograph.....	100.00	69.71	75.00
Postage.....	375.00	509.27	500.00
Depreciation.....	175.00	177.07	175.00
Addressograph.....	45.00	37.14	50.00
Telegrams.....	45.00	31.64	50.00
Council Members' Expense.....	12.50	5.20	-----
Council Meeting.....	50.00	48.59	150.00
Donations.....	50.00	50.00	-----
Tax on Checks and Exchange.....	80.00	61.32	75.00
Executive Secretary Travel.....	750.00	738.16	750.00
Committee Expense.....	50.00	103.08	-----
Interest on Notes Payable.....	-----	12.25	25.00
Auditing.....	-----	50.01	-----
General Expense.....	650.00	365.91	450.00
Interest Accrued and subsequently defaulted.....	-----	49.44	-----
	\$20,487.50	\$20,355.81	\$20,315.00
Item	1933		1934
	Budget	Income	Budget
Dues and Fees.....	\$13,224.87	\$13,521.27	\$14,000.00
Subscriptions.....	2,363.48	2,476.87	2,500.00
Advertising.....	1,004.59	957.70	1,200.00
Interest.....	723.65	488.73	400.00
Sale of JOURNALS.....	247.99	174.20	150.00
Miscellaneous Income.....	122.22	181.06	100.00
Executive Secretary Pledges.....	3,419.65	3,364.03	200.00
	\$21,106.45	\$21,163.86	\$18,550.00
Add Forest Education Survey.....	-----	414.09	-----
		\$21,577.95	

You will note that our actual expenses for 1933 were smaller and actual income was larger than we estimated in the budget at the beginning of the year. Let me

call your attention, also, to the fact that our income exceeded our expenditures by \$1,222.14. For each of the past three years we have come through with an ex-

cess of receipts over expenditures as follows:

1931	-----	\$ 77.08
1932	-----	1,007.55
1933	-----	1,222.14

\$2,306.77

This total saving of the last three years is more than sufficient to counter-balance any possible deficit for 1934 which as indicated in the tentative budget will at the outside be not more than \$1,765.00. It will, in fact, be much less than this,

because I am fully confident that we shall build up our income from annual dues through increased membership, from subscriptions to the JOURNAL and from advertising, to much higher figures than those given in this tentative budget. There is a fair prospect that before the year is over we will wipe out this prospective deficit entirely and may not have to draw upon the savings of the previous years at all.

The Society also owns the following list of securities:

Shares or Par Value	Security	Cost	Market Value Nov. 30, 1933
\$ 1000	American and Foreign Power	5's \$ 880.00	\$ 395.00
1000	Commonwealth of Australia	4's 982.50	835.00
2000	Federal Land Bank, Houston, Texas	4¾'s 2,055.00	1,730.00
3000	Missouri Pacific General Mortgage	4's 2,415.00	300.00
1000	Pennsylvania Company	4¾'s 999.24	620.00
11 shs	Pennsylvania R. R. Company	— 820.26	299.75
7 shs	Pennroad Corp. VT	6's 108.00	17.50
2000	Province of Ontario	4½'s 2,000.00	1,980.00
2000	St. Louis and San Francisco Consolidated Mtge.	4½'s 1,867.50	235.00
500	U. S. Liberty 1st	4¾'s 500.00	504.06
500	U. S. Treasury	4¾'s 489.69	529.84
1000	Wheeling Steel Corporation	4½'s 895.00	635.00
1000	Erie R. R. Refunding Improvement	5's 982.50	505.00
1000	International Match S. F.	5's 1,007.50	57.50
1000	Missouri Pacific 1st Refunding	5's 1,013.75	230.00
1000	Southern Pacific	4½'s 1,003.75	475.00
		\$18,019.69	\$9,348.65

These investments comprise, first, the Society's permanent fund of about \$2,990.00, which was set aside a number of years ago as such and from which the interest alone could be used to meet current expenses; and second, the accumulated net annual earnings of the past

five or six years which are held in this form until the Council may in its discretion decide to make use of them either to meet current annual expenses or other legitimate requirements of the Society. The Council has tentatively agreed to earmark as the permanent fund the following:

Par Value	Security	Cost	November 1 Market Value
500	U. S. Liberty 1st	4¾'s \$ 500.00	\$ 504.06
500	U. S. Treasury	4¾'s 489.69	529.84
2000	Province of Ontario	4½'s 2,000.00	1,980.00
		\$2,989.69	\$3,013.90

This leaves in the General Fund a list of securities with a total market value on November 30, 1933, of \$6,334.75, which is available as necessary in the discre-

tion of the Council to meet any current expenses and is sufficient to cover any possible deficit between annual income and annual expenditures for several years.

I fully expect that the Council will not find it necessary to draw on this reserve materially to meet the annual expenses for 1934 because I fully expect that we shall build up the income for that year sufficiently to offset such need. I am mentioning this situation so to emphasize how financially sound the Society is, how successfully it has weathered the storm of the depression and how well prepared we are to build and plan for further expansion of Society activities and services to its members with the fullest confidence.

I have here our auditor's complete report on the state of the Society's finances for the fiscal year ending November 30, 1933. In the absence of an expressed desire on your part, I shall not bore you with reading it in detail. If any member of the Society desires further details as to the Society's finances, I shall be glad indeed to furnish them to him if he will write me at the office.

Let me, however, add a word about the special Executive Secretary Fund. When definite decision was finally reached at the Society's annual meeting in 1928 to employ a paid executive secretary together with the clerical assistance and office facilities which he would require, it was estimated at the time that such an undertaking would increase the Society's annual expenses by something like \$10,000.00. The President and the Council were authorized and instructed to raise the additional funds needed by such methods as they might deem best and to proceed with the selection and employment of an Executive Secretary. It was decided by the President and Council to raise the funds by soliciting voluntary contributions from the membership, the objective being to raise a fund of \$30,000.00, which would permit carrying the Executive Secretary establishment for three years, or long enough definitely to prove its worth. By this method during 1929, not \$30,-

000.00 but only a trifle over \$18,000.00 was raised. The President and the Council decided to go ahead with the undertaking with the idea that if \$6,000.00 a year was not enough it would be possible to draw on the Society's reserves from the accumulated net earnings of previous years. The first Executive Secretary, W. R. Hine, took office early in the spring of 1930. He, as you remember, was forced to give up before his first year was out because of serious breakdown in health. The present incumbent succeeded him about the first of April, 1931. During this three-year trial period of an Executive Secretary, the objective was to build up regular annual income by increase of membership and from other sources so that by the end of the three-year period regular annual income would equal regular annual expenses, including the cost of the Executive Secretary. We started out with a deficit of \$10,000.00 a year. Each year we have gradually reduced that deficit and by the end of 1934 we confidently expect that it will have been wiped out entirely. We have done this during the three most difficult years that could have been picked for such an undertaking.

EXECUTIVE SECRETARY'S REPORT

Each month in the Society Affairs Section of the JOURNAL, under the heading, "Doings of the Executive Secretary," is given a brief account of his activities during the preceding thirty days. Those of you who have had time to read the JOURNAL have in this way been able to keep in touch with what your executive officer has been doing to earn his pay in the service of the Society and its membership. I might mention here one or two of the major activities I have been engaged in.

Mr. Hine, as you remember, shortly after he took office, inaugurated a system of maintaining a very detailed record of

every member's professional experience and qualifications so that the Society could be of service to him in helping him advance himself in his position or in making new and more profitable connections. Something like 1,000 members filled out and returned the Record of Members from which Mr. Hine sent them and this record I have found extremely useful in helping the different members who might be candidates for new positions. Mr. Granger, as director of the forestry part of the E.C.W. has used these records in selecting men for positions in that activity. We have used it also in recommending men to fill forestry positions created by other phases of the New Deal program and to some extent in private employ. During 1932 we were accumulating in the Society's office a steadily growing list of members who had been thrown out of employment by the depression. This list has now entirely disappeared and to date I think I can safely assert that our profession is the best employed profession in the country.

Many of our members, to be sure, are in positions connected with the E.C.W. which are supposed to be more or less temporary but the way I look at it is this: that as the E.C.W. ceases to need the services of these men, there will be new development and expansion in forestry activities which will create new and increasing demands for professional foresters and will absorb these men as fast or faster than the E.C.W. can dispense with their services.

During the past several months I have been putting in all of my spare time helping with Article X of the Code of Fair Practice for the Lumber and Timber Products Industry. Let me refer you to my report in the December JOURNAL on the October conference and particularly to President Granger's statement which he presented on behalf of the Society at that conference, on pages 894-895.

This Article X of the Lumber Code is definitely in line with the principles of forest policy adopted by the Society some two years ago and which gave the President and the Executive Secretary of the Society full authority to coöperate with the other parties at interest to the fullest extent possible in writing Article X into a definite program of action for bringing about the application of sound forest practice to the privately owned forest properties of the country.

The second conference on Article X will be held January 25 and 26 and I expect as soon as I get back to Washington to have to put in a good deal of time in helping to prepare for it since at the October conference I was appointed a member of its Executive or Steering Committee and was selected by the other members of that committee to serve as their secretary.

REPORT OF THE EDITOR-IN-CHIEF

As you of course know, I have since last January been serving as Editor-in-Chief of the JOURNAL OF FORESTRY as well as Executive Secretary of the Society. Emanuel Fritz, who for the two years previous, had been managing the JOURNAL, had been forced to give up the task on account of the pressure of his duties in connection with the forest school at the University of California. In order to give itself time to select a competent successor, the Council selected me to serve as acting editor until the May, 1933, issue was off the press. Ever since the executive secretary undertaking had been initiated, there had been a certain school of thought amongst our membership that the functions of executive secretary and editor-in-chief should be combined in one man. This idea was revived during the summer and the President and the Council finally decided to put it to a practical test, appointing me as Editor-in-Chief for the present winter season, or until the

May, 1934 issue of the JOURNAL is completed. I am therefore carrying on in that fashion. Whether the scheme is a satisfactory one and should be continued must be decided by yourselves and the way for you to reach such a decision is to judge the JOURNAL as it comes to you each month.

The JOURNAL is managed not by myself as Editor-in-Chief with dictatorial power, but by the editorial staff composed of 8 associate editors, each of whom handles a special field of forestry literature and who advises with me as to JOURNAL policy in general. The editorial staff, furthermore, is subject to direction and guidance by the President and Council, who from time to time are consulted on questions of fundamental editorial policy. I want to take this opportunity to express deep appreciation of the ready assistance which every member of the editorial staff has rendered. It has been my practice to submit to the associate editor within whose field it falls, every article offered to the JOURNAL for publication. Every associate editor has acted promptly and most helpfully in advising for or against the acceptance of the material offered, or in making suggestions how it might be improved.

At the back of the magazine we have a section entitled "Society Affairs" which is devoted exclusively to the activities of the Society and its officers and of the Society's Sections. I have heard some members characterize this section of the magazine as the best section of it and urge that it be put in front. Others, on the contrary, have disparaged it as simply being a catch-all to carry immaterial stuff for which there is no other place. I have been trying earnestly to make the Society Affairs section a means by which members of the Society and the profession can keep in touch with the progress of Society events, with the movements and activities of its several Sections and

its individual members and to put into it as large an element as possible of human interest. I will be glad indeed for suggestions and comments pointing out where and how it could be made better.

As to the editorial policy of the JOURNAL as a whole: I have always looked on the magazine as a publication which so far as possible should be run in a fashion to suit all the members of the Society to whom it belongs and who support it by their annual dues. I am continuing the policy laid down by my predecessor, Emanuel Fritz, and am trying so far as possible to make each issue a balanced issue containing something in each one of the numerous forestry fields. Very few of the JOURNAL readers probably will want to read every article in it but I am trying to get out a publication in which every reader will find at least one article that is worth his while. Furthermore, it seems to me that the JOURNAL ought to be a medium for free expression of independent opinion on all important questions of forest policy and forest practice. That it should not be the monopoly of any one particular school of thought but that its pages should be open to the expression of all schools of thought and all of the varied opinions which are sure to develop around all of the new and varied forest undertakings arising out of the New Deal.

As to the editorials: You may have noticed that since October, most of the editorials have been written by others than myself. It has been my feeling that the editorial pages of the JOURNAL should be equally open to any member who is competent to write an editorial of high quality on some topic of timely interest. It has been my policy to publish an editorial of my own only when I could not get a better one from someone else. There is no reason in my judgment why one man, simply because he carries the

title of editor-in-chief, should have a monopoly of the editorial page.

Probably in the foregoing I have said enough about editorial policy to start a discussion of it. I will be glad indeed to get ideas and suggestions from all of you.

Mr. Granger: I would like to reserve the discussion of the JOURNAL policy until a little bit later and take up other things at this time.

Our friend Dana has to leave shortly. I would like to give him an opportunity to report for his committee on the Stabilization of the Forest Industry, which is one of five committees appointed two years ago under the general forest policy adopted by the Society, with a view to laying out definite programs which the Society might follow in order to begin putting into effect the concrete proposals of its forest policy.

Dr. Dana: The report in its present form has not yet received the approval of the entire membership of the committee. I am still getting the material in shape for presentation. All members of the committee have not yet had a chance to express themselves. Approximately one-half have expressed a willingness to sign it in its present form.

REPORT OF THE COMMITTEE ON STABILIZATION OF THE FOREST INDUSTRIES

The forest policy approved by the Society of American Foresters in 1931 included this statement: "The government should protect the interest of the public against the losses sustained both by the public and the forest industries through overproduction and wasteful exploitation of forests."

In accordance with this declaration, the present committee has been asked to suggest ways and means of stabilizing the forest industries. Since its organization in the spring of 1932, programs for achieving the same end have been proposed by

the Timber Conservation Board, the Western Pine Association, and the U. S. Forest Service in its "National Plan for American Forestry." More recently the "Code of Fair Competition for the Lumber and Timber Products Industries," approved by the President on August 19, 1933, constitutes a practical attempt to promote the stability of these industries under the National Recovery Act; and the conference on Article X of the Code held in Washington on October 24-26 elicited many suggestions for attaining this objective.

These various proposals include a wide range of measures, nearly all of which can be grouped under the following heads:

1. Adoption of improved methods of forest management, including
 - a. Protection from fire, insects, and disease.
 - b. Selective logging and other silvicultural measures.
 - c. Sustained yield.
2. Increased public ownership of forest lands.
3. Curtailment of public timber sales.
4. Tax reduction and reform.
5. Provision of more and cheaper credit for the forest industries and for home builders.
6. Expansion of research in the growing, harvesting, and utilization of forest products, accompanied by extension activities to facilitate practical application of the results.
7. Improvement in the manufacture, grading, and marketing of forest products, including
 - a. Industrial integration.
 - b. Establishment of selling agencies.
 - c. Trade promotion.
8. Reduction and adjustment of lumber freight rates.
9. Mergers of timberland holdings and manufacturing plants.
10. Control of lumber production through

- a. Intrastate agreements.
- b. Interstate compacts.
- c. National Recovery Act.
- d. Modification of the anti-trust laws.

In considering so many diverse proposals the committee believes that the most important service which it can render is to center attention on the fact that the problem of stability is fundamentally a forest problem. Temporary relief may be afforded the industry as a result of increased prosperity brought about by skillful advertising, more effective manufacturing and merchandising, or controlled production. But this will have a permanently stabilizing effect only if it leads to such forest practices as assure a continuous supply of the raw material on which the industry depends. These practices must go further than merely keeping forest lands productive; they must provide for balancing growth and drain so that approximately equal quantities of material will be available year after year.

In other words, sustained yield forest management constitutes the indispensable basis for any enduring stabilization program. Without it, other measures are at best merely palliatives. With it, more adequate protection and better silviculture follow as a matter of course; greater incentive is offered for the development of improved products and more permanent markets; and the steady supply of raw material produced and harvested places an automatic check on overproduction.

In this connection it is important to note that a sustained yield policy does not necessarily imply the practice of intensive forestry on our entire forest area. Hitherto we have rather generally assumed that this would be essential to meet our requirements for forest products. Many now believe that such an assumption is not warranted, and that we face a decreased demand for forest products which can readily be supplied by less intensive measures. If this is so, it constitutes no argument against the sus-

tained yield principle but merely means that less intensive management will suffice to meet our needs. Under such conditions protection from fire might well constitute the only effort at management on the poorest lands, with increasingly intensive forest practice as the areas involved become better and more accessible. Flexibility in modifying the total amount of material produced to meet the changing needs of the times is therefore entirely consistent with stability in current production under any given program.

Adoption of sustained yield as a stabilizing influence is particularly urgent on the privately owned forest lands of the country, which contain 80 per cent of the forest area and contribute some 95 per cent of the present wood production. It may therefore be well to summarize briefly the advantages which it offers from a strictly economic point of view:

1. It assures a continuous supply of raw material for the maintenance of the forest and wood-using industries and the numerous other industries and services dependent thereon.

2. It substitutes permanent plants and permanent communities for "ghost" towns, and avoids the costs and losses inherent in a migratory industry.

3. It tends to maintain a reasonable price level for forest products and to eliminate the violent fluctuations in prices resulting from alternate periods of overproduction and underproduction.

4. It reduces to a minimum the capital investment necessary to maintain any given level of production, and thereby decreases carrying charges in the form of interest and taxes.

5. It does away with the depletion charge which is necessary when the forest is treated as a mine.

6. It obviates the necessity of frequent re-investments of capital, with the costs and risks attendant thereon.

7. In the long run it will adjust manufacturing facilities to the capacity of the

forest for sustained production, and will thereby wipe out the charges now resulting from interest, taxes, maintenance, and depreciation on excess equipment.

In spite of these substantial arguments in its favor, sustained yield has so far been adopted as a basic policy by few private owners. There are, of course, many reasons why this is so. The "cut-out-and-get-out" method of forest utilization has prevailed so long and has been practiced so universally as to make a sudden shift to a radically different method both psychologically and financially difficult. Timberlands have been capitalized on the basis of their value for prompt and complete utilization at a figure considerably higher than the value of the property if handled for sustained yield. This has resulted in unduly large capital investments with consequent heavy charges for interest and taxes, and has naturally tended to force liquidation at the earliest possible moment. That tendency has been intensified by the impossibility of obtaining reasonable insurance against the ever-present danger of timber destruction by fire, insects, or disease; by uncertainty as to the future tax burden; and in recent years by doubt as to the future demand for wood. Finally, timberland owners generally have failed to appreciate the economic possibilities of sustained yield—a failure due in large part to the lack of concrete management plans prepared by competent foresters with full consideration of business as well as silvicultural factors.

These various difficulties can be met in part by the adoption of some or all of the other remedial measures that have been proposed. For example, adequate protection of the forests from fire and other destructive agencies, under a program of federal, state, and private co-operation, will greatly decrease the hazard now inherent in timber ownership, and will make forest insurance feasible. Additional research in the fields of eco-

nomics, silviculture, and wood technology, accompanied by appropriate extension activities, will supply and make available the basic information on which improved practices must rest. Particularly important is the strengthening of the wood-using industries through improvements in the manufacturing, grading, and marketing of forest products, since timberland owners will obviously not be interested in sustained yield forest management unless there is an ample and profitable market for their product.

An increased acquisition program would relieve the present pressure for destructive liquidation by transferring to public ownership (1) areas of merchantable timber which private owners can no longer hold without serious loss, and which they cannot cut without further flooding the market; and (2) areas which have been selectively cut under plans approved by the purchasing agency, and which the owner cannot afford to hold until the next cutting cycle. Acquisition of lands already stripped, while an important step toward the eventual development of permanent communities, can have little immediate effect in promoting the stability of existing industries. The details of any acquisition program, including ways and means of financing it, will presumably be worked out by the Society Committee on Public Forests. The present committee desires merely to emphasize the importance of such a program as a stabilization measure, quite aside from other arguments in its favor.

The present Forest Service policy of marked conservatism in the making of timber sales tends to promote stability in private enterprise by keeping national forest timber off an already flooded market. It is assumed that the same policy would apply to the areas obtained under an enlarged acquisition program.

Excessive taxation, actual or threatened, has been a powerful factor in discourag-

ing owners from undertaking sustained yield management and must be avoided if private forestry is to become a reality. The committee believes that the most promising means of improving the present situation are by reducing governmental expenditures through more efficient organization and administration, particularly of counties, townships, and school districts; by centering certain functions of general public interest, such as the maintenance of roads and schools, more largely in the state government, by broadening the tax base; and by valuing forest properties for assessment purposes on their income-producing ability. Modification of the existing method of taxation may be desirable in some instances, but will become decreasingly so as these other reforms are effected and as sustained yield management is approached. In fact, a sustained yield forest properly valued would carry approximately the same burden under the unmodified general property tax, the adjusted property tax as recommended by the Forest Taxation Inquiry, and the yield tax.

Mergers can be of value in promoting sustained yield management in two distinct ways. They may increase the forest area under a single control sufficiently to afford a permanent supply of raw material for existing manufacturing plants under the same control; or by concentrating control over a group of competing plants they may permit reduction of output (in some cases by actual plant abandonment) to an amount which can be maintained indefinitely by the tributary timber. Consolidations are of doubtful value unless they contribute to one of these two ends, and may even be a positive disadvantage by increasing overhead expense and introducing more difficult problems in organization and management. Size alone is no guarantee of either efficiency or stability.

Government provision of cheaper credit might permit the refunding of existing

obligations on a more advantageous basis and might encourage investments in constructive forest projects from which no immediate return can be expected. However, the going rate of interest is usually a fair index of the risk of the enterprise, and may be expected to fall automatically as stability replaces speculation. Existing legislation should prove helpful in increasing the volume of building.

Industrial control of production, such as is being attempted under the Lumber Code, may increase prices, although this has not always been its result, either in this country or with the European cartels. On the other hand, in order to prevent monopoly prices, it is apt to necessitate a degree of public supervision that will be distasteful to industry.

In connection with all of these measures, it should be remembered that even if they result in increased profits, they merely put the industry in a better position to practice improved forest management without guaranteeing that it will actually do so. Consequently they may or may not promote stability. Indeed, there is always the danger that greater profits, by making possible more rapid liquidation, may again bring on industrial overproduction and result in still further forest depletion.

The committee therefore endorses the principle embodied in Article X of the Lumber Code under which private and public agencies mutually agree to undertake the measures necessary to insure sustained forest production, and hopes that it may be followed permanently. It believes that whenever special privileges are granted the industry, as for example in taxation or in the provision of credit at low rates of interest, there should be adequate assurance either by voluntary action on the part of the industry or by some form of public control that the benefit is reflected in improved handling of the forest. Only so can the public feel reasonably certain that the goal of in-

creased industrial stability through increased forest stability will actually be achieved. Presumably the procedure for doing this is being worked out by the Committee on Coöperation to Improve Exploitation Practices and the Committee on Public Control of Private Forest Exploitation.

In the last analysis the success of sustained yield forestry on private lands will depend on the preparation and application of concrete management plans for individual properties. These should include case studies of the financial returns to be expected from better protection, selective logging, and sustained yield as compared with those from destructive logging; should take into consideration the possibilities of developing additional revenue from other forest resources, such as fur, fish, game, and recreation; and should contain definite recommendations as to methods of cutting and cutting budgets. The Society can perform a service of the greatest value in bringing about coöperation between timberland owners and foresters in the making of specific studies of this sort which alone can determine the extent to which improved practices are compatible with reasonable profit.

When conditions on a given property are unfavorable to sustained yield, as is often likely to be the case, consideration should be given to the possibility of obtaining a better set-up through combination with other adjacent or intermingled properties. Such combination might take the form of a physical merger or of unified management under independent ownerships. Specially favorable circumstances for the adoption of the second alternative exist where public and private lands occur together in an area that should logically be handled as a single sustained yield unit. Here permanence in industrial and community development would be assured through handling the resources in the two ownerships under a long-time agreement so framed as to

safeguard the interests of all concerned. In addition, there may well be districts chiefly or entirely in private ownership where the government (federal or state or both) can advantageously acquire land for the primary purpose of handling it in coöperation with other owners in such a way as to promote stability in the management of a much larger total area; or where it can participate through the purchase of stocks or bonds in the activities of a corporation organized to consolidate scattered holdings into larger units capable of sustained yield management.

In conclusion, the committee believes that under our present economic system complete stabilization of the forest industries, or any other industries, is impossible and probably undesirable. A relative stability which will better protect public and private interests alike from the losses now incident to overproduction and wasteful exploitation of the forests is, however, feasible and is a goal worth striving for. To this end the committee recommends:

1. That the Society of American Foresters, as an organization and through its individual members, on every possible occasion emphasize the fact that the problem of stability for the forest industries is fundamentally a forest problem in the solution of which sustained yield forest management is an essential measure, and that such management can best be attained through the application of working plans for specific tracts prepared by men with adequate technical training.
2. That the Society urge the Forest Service, in coöperation with state and private agencies, to continue as a permanent project the collection and analysis of the basic facts as to wood requirements and forest productivity necessary for the development of a rational sustained yield policy for the nation.
3. That the Society endorse the principle embodied in Article X of the Code of Fair Competition for the Lumber and

Timber Products Industries that both private and public agencies are under a definite obligation to put into effect the measures appropriate to their respective spheres of action which are necessary to make sustained yield management a reality.

4. That the Society coöperate in every way possible with the lumber and wood products industries, the Lumber Code Authority, and governmental agencies in formulating and securing the adoption of such measures.

S. T. DANA,
Chairman.

Dr. Dana: The committee feels that through this report its usefulness as a committee ends and the stabilization can best be handled by committees of more specific size than a committee covering a broad region. Special committees will take up specific activities and make an effort to be as effective as possible as a group. I move that the report be accepted and printed and the committee disbanded.

Mr. Granger: As to the mechanics of this reporting business, the committees were appointed by the President with the approval of the Council and technically the report is made to the Council which should consider its submission to the Society as a whole or in part for action. This meeting cannot very well take formal action either as to adoption or rejection of the report or approval of the recommendations of the chairman for dismissal of this committee and substitution of other committees on more specific topics. This will have to be acted upon by the President and New Council. They would be only too glad to have any discussion of this report which the meeting wishes to indulge in.

Mr. Bernard Frank: There is one point which I did not get clearly with respect to aids to private timberland owners. I

do not remember hearing whether any provision is made in the resolution for the timberland owner having to present a management plan before the subsidy is granted or to put that management plan into effect after the subsidy is granted.

Dr. Dana: It is assumed that the details of working out any arrangement will be taken up in specific cases. The report was simply intended to emphasize the principle that if special inducements are offered a timberland owner, the owner should reciprocate by adopting measures necessary to satisfactory forest management. I did not attempt to work out the details by which this is to be accomplished.

Mr. Granger: We will now hear from the chairman of the Committee on Public Forests and Protection Forest Zones, set up to consider the question of public acquisition of forests as required both for the protection of watersheds and production of wood and the supply of other services forests can give.

Professor Hosmer: The committee is not ready at this time to make a report either formal or informal. A brief informal report was submitted at the last annual meeting at San Francisco in which were outlined certain points that we consider the function of the committee and made a rather modest statement as to the size of acquisition. I had in mind recommending 100,000,000 acres. The report went in as recommending 50,000,000 acres. A few months later the Copeland Report came out with a recommendation for 224,000,000 acres. The Copeland Report has in effect, taken this question away from us. In talking with officers of the Society there is still a function which the committee can perform and that is to make some constructive and critical comment on suggestions of the Copeland Report with respect to acquisition, since

these may help in the general education of the public in connection with acquisition in general and more particularly with the protection forests. I hope that the committee can submit such a report sometime during the coming month.

I will try and get the committee report out sometime this spring with the idea of it being published in a late spring issue of the JOURNAL; that is the report on the acquisition problem.

Mr. Granger: We will now hear a report from the Committee on International Relations of which Mr. Hosmer is also chairman.

Professor Hosmer: For the Committee on International Relations, I have a brief report to make. This was prepared by myself without consultation with the other members of the committee. It refers to Mr. Ringland's report on foreign forestry which is worthy of reading.

REPORT OF THE COMMITTEE ON INTERNATIONAL RELATIONS

The year now closing has seen a continuation of friendly relations with the foresters of other countries and in a number of cases the strengthening of these ties through visits made by members of this committee to Europe, or by the coming to this country of foreign foresters.

Prior to his recall to the United States in June 1933, due to the reorganization of the Foreign Service of the U. S. Department of Agriculture, Arthur C. Ringland completed his study of the great Italian land-use project "Bonifica Integrale," which in many ways has important bearings on the projects being initiated by the Tennessee Valley Authority. The results of Ringland's study were made public in a mimeographed report issued by the Forest Service in the early summer, and by an illustrated article in the July issue of *American Forests*.

During the first half of the year Ward Shepard continued in Germany his studies of European forest policy, administration, and management, establishing close contacts with numerous German foresters during that period. An appreciative note concerning his visit appeared in *Der Deutsche Forstwirt* of September 12, 1933.

This autumn, during a visit to Mexico, John D. Guthrie interviewed officials of the Mexican Forest Service and made a start toward establishing closer relations between the Mexican Society of Foresters and our own organization.

Among European visitors to this country, especial mention may be made of Prof. Dr. Eino Saari of Finland who was in the United States for a period of about six months. During this time he and Mrs. Saari made a wide circuit by auto, visiting more places of forest interest from the Atlantic to the Pacific than are. I venture to say, personally known to many members of the Society. Professor Saari's keen and analytic mind and his delightful personality make him a welcome guest in all forestry circles.

It may be in order to repeat here the fact that Edward N. Munns is now Vice-President of the International Union of Forest Research Organizations which has its headquarters at Stockholm, Sweden.

During the year the chairman and other members of this committee have been able to cause publications, or replies to specific inquiries, to be sent to foresters in a number of countries overseas, including the Soviet Republic. Not a little interesting material has been received in exchange. Frequently in this way new information can be got in advance of publication, or that is not easily to be obtained through regular channels.

The forestry libraries of Europe are glad to obtain American material that is of general interest and permanent value. The recommendation is repeated that those members of the Society who are in a position to do so bear in mind the de-

sirability of adding the names of such libraries to the appropriate mailing lists.

As is usual prior to the annual meeting an invitation was sent out rather generally to the officers of the societies of professional foresters in other countries, expressing the hope that representatives of these associations might be present at the annual meeting of this Society. Many cordial responses to this letter have been received, indicating that this gesture was appreciated, even if the invitation could not be accepted.

Among the functions of this committee are the duties of being of what service it can, by suggestion or otherwise, to those members of the Society who are planning trips abroad, and on the other hand, of aiding foresters from other countries to plan their tours in the United States so that they may use the time at their disposal to the greatest advantage. It is to be hoped that in coming years more and more such visitors may find their way to our shores.

RALPH S. HOSMER,
Chairman.

Professor Hosmer: In connection with my report, I would like here to refer to a letter which I have received from Señor de Quevedo of Mexico, in response to an invitation to attend this meeting. In forestry Señor de Quevedo is the grand old man in Mexico. He attended the Conservation Congress in 1905 in Washington when Theodore Roosevelt was in the White House. Señor de Quevedo has written me that he was not coming to this meeting because it was necessary for him to be at home in Mexico to appear before legislative bodies to argue for a reorganization of the federal statutes concerning forestry. Forestry is a live issue in Mexico. The reorganization of their forest work appears to be quite important. John Guthrie, when he was in Mexico last summer, met this man and

suggested closer relations should be arranged between Mexicans and our South-western Section of the Society. I hope that this may come about. The Council has suggested that it might be well to consider amending our Constitution so as to permit Mexican foresters to become members of the Society just as we now permit residents in Canada and Newfoundland to become members. We have several revisions of the Constitution in mind and it might be well to have this particular point given consideration.

Question: Has the committee as such attempted to keep a file of literature from foreign countries?

Professor Hosmer: We have not received enough of such literature to make it worthwhile. Any thing of special importance is called to the attention of the Forest Service and they are able to send for duplicate copies. It is a point worth considering and will be suggested to the Executive Council. If the Society did not want to maintain such a library the material could be turned over to the Forest Service and should not be lost. A good deal of material is obtained in that way.

Question (by same member): What is the grade of membership for such foreign foresters you propose? Would it be "corresponding" or "honorary membership" for such men as have the qualifications of Senior members. We have a group of four or five Europeans whose names we wish to suggest for membership. There are a lot more Europeans and foreign foresters who might be members. An increase in the number of foreign members would be a very fine thing.

Professor Hosmer: If members know individuals whom they think should be members it would be an excellent thing to start action towards their recommendation for membership. Three or four Senior members can set the thing going.

Mr. Granger: Mr. Chapman will read a report submitted by Dean Graves, who

has not been able to be present, for his Committee on Public Control of Private Forest Exploitation.

REPORT OF THE COMMITTEE ON PUBLIC CONTROL OF PRIVATE FOREST EXPLOITATION

The present committee is one of several which were appointed as a result of the Report of the Committee on Forest Policy submitted to the members of the Society in the winter of 1931. That report presented the broad principles of policy which should be recognized as underlying a program of forestry for the Nation. Among other items were the principles which should govern possible action by the public in exercising control over the management of private forests so far as necessary to prevent injury to the public interests.

The special Committee on Public Control of Private Forest Exploitation was appointed to study and report on the problem of specific action by the federal or state governments, or both, looking to public regulation of private forests. No formal report was made by the committee at the annual meeting of the Society in 1932, on account of the abnormal economic and industrial conditions prevailing in the country, which affected every owner of forest property. Moreover the situation was such that many members of the forest industries recognized that public help was absolutely necessary for recovery and for stabilization, and that such help would be unlikely unless provisions were made for the handling of forests on the basis of sustained production. Moreover many persons in the industry were coming to recognize that the principle of sustained yield management is an important feature in curbing unrestrained liquidation and overproduction. The committee felt, in the fall of 1932, that the economic conditions were shifting so rapidly, with uncertainty and

anxiety widely prevalent, that any proposals regarding public regulation of forest practices on private lands would be largely academic. For this reason the committee requested time for further study in light of conditions that might obtain during the following year.

The Copeland Report.—A valuable contribution to the subject of public regulation of private forests was included in the Copeland report by W. N. Sparhawk, a member of the present committee. Mr. Sparhawk's two chapters, entitled "Public Regulation of Private Forests" and "A Possible Program of Public Regulation," include not only a full discussion of regulation as it may be applied in this country, but also a sketch of the present laws and practices in foreign countries where the principle of public regulation of private forests is recognized.

In the final conclusions of the Forest Service in the National Plan for American Forestry, public regulation is recommended as a principle, but no specific legislation is proposed. It is pointed out that regulation may be brought about as a condition of authorization by the government for mergers and/or curtailment of production, and/or aid to industry by loans. The conclusions are summed up in the statement: "From the public standpoint, regulation with the exceptions indicated (authority for mergers, curtailment of production, loans, etc.) could be held in reserve for possible future use in case public acquisition lagged so seriously behind the program recommended as to jeopardize the public interest, or in case of the continued failure of private owners to keep or to bring their lands into productivity."

It should be noted that the foregoing recommendation was made before the passage of the National Industrial Recovery Act.

A New Situation.—An entirely new situation with reference to the problem of forestry on private lands has been

created by the National Industrial Recovery Act and the action of the Administration under the emergency authority granted to the President. The way has been opened for the initiation of the first steps toward a widespread application of the principles of forestry on private lands. The Lumber and Forest Industries Code lays the foundation for the application of most of the principles outlined in the Report of the Committee on Forest Policy of the Society of American Foresters in 1931, and in addition provides for the organization of the forest industries, with authority to combine in control of production and in other ways to stabilize industrial conditions and employment. In Article X the associated industries definitely commit themselves to "undertake, in coöperation with public and other agencies, to carry out such practicable measures as may be necessary for the declared purposes of this Code in respect of conservation and sustained production of forest resources."

In Article X the Secretary of Agriculture is requested to call a conference which will recommend to the Administration needed public measures in forestry and also will "make recommendations for industrial action to the Authority, which shall promptly take such action, and shall submit to the President such supplements to this Code, as it determines to be necessary and feasible to give effect to said declared purposes. Such supplements shall provide for the initiation and administration of said measures necessary for the conservation and sustained production of forest resources, by the industries within each Division, in coöperation with the appropriate state and federal authorities. To the extent that said conference may determine that said measures require the coöperation of federal, state or other public agencies, said measures may to that extent be made contingent upon such coöperation of public agencies."

The Conference on Article X.—At the

writing of this report a conference called by the Secretary of Agriculture has already been held in Washington to outline the procedure for the formulation of codes of forest practice by the regional divisions of the industries, and to present recommendations to the Administration for public action to aid the industries in carrying out such regional codes of forest practice. A call has been issued for a second session of the conference to be held in January, 1934, when recommendations as to measures to carry out the commitments under Article X will be crystallized in form for presentation to the National Lumber Code Authority and to the President.

The proposals regarding the handling of forests under the Code are singularly in line with the principles of regulation of private forests outlined in the Report of the Committee on Forest Policy of 1931, which was approved by a majority of the members of the Society by referendum vote. In short the action under the code promises to become the first step toward a widespread application of forestry measures on private forest lands.

The Society of American Foresters is ably represented in the conference, both by its official conferees and by participation of its members as representatives of other organizations. Its members are to be found not only among the public conferees but as representatives of the industry. In the general organization of the conference and in every committee the influence of the Society through its members is potent. In large measure its members are shaping the thought of the conference and they will likely be influential in determining its conclusions.

Conclusion.—The present undertaking represented by the efforts to bring into application regional codes of forest practice is a part of an emergency law and administrative authority. The continuance, after the emergency has passed, of the policy of permitting and encouraging

industrial organization in ways that contravene the provisions of the anti-trust laws cannot now be determined. If the policy succeeds in a better organization and control of the forest industries, with full safeguards to the public interests, there will be strong pressure to have the plan continued through later congressional legislation. If the industries are successful in actually undertaking in the forests the policies of improved forest practices to which they have committed themselves, the ground work will have been laid for a type of regulation of private forests under broad federal control and under the administration of regional boards. The question of the need of further legislation, federal or state, to prevent uncontrolled and wasteful exploitation of a destructive character will depend on the success or failure of the operation of the forestry provisions of the Code.

The committee recommends, therefore, that its functions be continued during another year, with a view to a report in 1934 in regard to the operation of the Code as a means of accomplishing the purposes contemplated under the head of public regulation of private forests as usually understood, and in regard to further steps that may be required.

HENRY S. GRAVES,
Chairman.

ELECTION PROCEDURE

Mr. Granger: There are several important questions before the Council which merit some consideration by this meeting. One of the most important is in relation to the manner of electing the Council and officers of the Society. Many members feel that members of the Council should be elected in such a manner as to provide definite representation for the individual sections of the Society or for groups of sections representing a given territory. This subject has been dis-

cussed informally throughout the membership by means of consideration in section meetings and otherwise and this discussion has indicated a lack of interest on the part of the majority in changing the method of election which has prevailed under the Hare system. However, within the last six or eight months there has appeared to be a growing feeling in favor of direct representation. The Allegheny Section, which first sponsored the idea, has circulated a petition asking the Council to submit their plan to the vote of the membership.

In order that I may be sure of announcing exactly what the petition calls for, I will read it:

"We, the undersigned members of the Society of American Foresters, believe that the Constitution does not provide a representative Council and that it should be amended to provide:

"(1) For the nomination and election of the President and Vice-President separately from members of the Council, but otherwise as at present provided.

"(2) For the nomination and election of the Council members exclusive of the President, Vice-President and retiring President, on the basis of not more than eight regions, each composed of one or more Sections, as determined periodically by the Council as to maintain approximately equal voting strength.

"Proposed amendments to the Constitution to make these changes effective were submitted to the Council on December 23, 1931, and on November 26, 1932, the Council declined to submit them to the membership on the ground that sufficient interest in them was lacking.

"Since it is believed that the informed sentiment of the Sections now favors the proposed changes, the Council is hereby petitioned, as provided in Article VII, Section 3, to submit to the membership for vote on their acceptability the amendments necessary to make effective the rec-

commended regional representation in the Council."

Knowing there was a substantial increase of interest in being allowed to vote separately for the President and Vice-President, Reed and I discussed with Murphy, who is the leading exponent of the Hare System, the question of whether we could not at the last election have the vote registered separately for the President and Vice-President within the group whose votes for the Council would entitle them to a place on the Council anyway. Murphy said we could, but in order to be sure that we were not going off on the wrong tangent, I had the question investigated by a lawyer in the Forest Service and he considered it from the standpoint of constitutional requirements and agreed that it was perfectly permissible under the general outline of the Hare System for us to follow that plan. We did so but due to inadvertence the instructions for voting under that system were sent out over the names of the nominating committee. The nominating committee, not having been informed of what it was all about and having some doubt about the constitutionality, promptly objected to the responsibility. Reed and I regret the inadvertence, and have made our peace with the nominating committee and believe it is now understood just who is responsible for the change.

There is evidently more flexibility in the Hare System than we formerly supposed, but whether there is sufficient flexibility to meet the present desires of the Society is not known. This subject is now open for discussion, whether or not we should adopt the Allegheny plan; whether the present system is the best one; or whether some other plan would be more desirable. What we should have is a plan which will give us the strongest Council and develop the Society.

Dr. Schmitz: I have thought a little about this change in the method of elect-

ing members of the Council. It occurs to me that if we turn over the election of members of the Council to the sections there is grave possibility that the general standard of qualifications of the men selected by the sections may not be quite as high as when the entire Society votes on them. I say that after considerable experience with one section in which the members were probably more apathetic than in other sections. This may be one way to overcome this and also provides for section representation. We might permit each section to nominate three senior members but leave the actual selection of Council representatives to vote by the Society as a whole. We might have the entire membership vote on the particular Council member from that particular section. I prefer that method to permitting each section to select its own particular Council member.

Member: I am interested in that proposal but do not believe nomination by sections necessarily means people in the section are going to vote for their own nominees.

Dr. Schmitz: One of those men would be elected from each one of the eight sections. The particular selection of the individual from the three nominated by each section would be made by the Society as a whole rather than as a section.

Mr. Preston: I would like to register my opposition to the plan of electing Council members by regions. Nothing is to be gained by it over the present system and it might be worse. I also do not see any particular reason for it based on past experience. We have had good Council members and I do not believe experience indicates that they have been in any way provincial or narrow in point of view and to set up another system based on theory that we should have regional representation is not backed up by any specific examples of failure to deal with Society matters

in a big way and therefore, to attempt to change the scheme and install a new one on a purely theoretical basis is hardly justified. I would rather have an opportunity to vote for those candidates whom I think are the best qualified to conduct the affairs of the Society and not be forced to vote for them because they happen to be from a definite section. I would like to have an opportunity to vote for the president of the Society by name based on his record, etc., and not blindly as we do now. I am perfectly satisfied with the present Council scheme.

Dr. Schmitz: One reason for wanting regional representation is that a good many younger men feel they would be able to vote for men whom they knew. Of the whole group of men on the list perhaps there are several outstanding men with whom they are familiar and they will know whether or not they are qualified. As far as the rest of the Council are concerned they will know very little about them. This has been my observation and that of a good many men with whom I have discussed it.

Mr. Granger: As I have said, the petition will be placed before the Council and the Society as a whole will have an opportunity to vote yes or no on it. I believe the discussion would be more helpful to the new president and Council if it dealt with other possible changes in the system which might be adopted if any are considered desirable as alternatives to this one or the present system.

Professor Hosmer: In the interest of getting something done on this it is quite obvious that this change and possibly others that may be discussed and brought before the Council later entail a modification of the constitution. It would seem to me rather desirable that this meeting go on record as recommending to the Council the consideration of the matter of appointing such a committee. This

meeting does not represent the Society as a whole. We can recommend to the Council that they consider setting up a committee on revision to the Constitution not only for this particular section dealing with elections but with other points. I wish to make it as a motion that this meeting recommend to the Council that it set up a committee on the revision of the constitution with special relation to the election sections.

(The motion was made, seconded and carried that these recommendations be made to the Council.)

Professor Prentice: I would like to ask as to how many Sections have taken action on this proposal.

Mr. Reed: The question was put up to the Sections for an opinion two years ago. There are 17 Sections and 13 responded. Less than one-third of the Sections favored the idea. That is why the Council did not go through with it. Later, the Allegheny Section circulated its petition asking the Council to put the question up. They have secured the signature of 250 members of the Society all over the United States. Support of the idea seems to be pretty widespread.

Professor Hosmer: In making the motion I think they should go through with this. It was not intended to block off any further discussion. As a member of the Council I would be delighted to get the expressions of opinion on this or any other plan.

Professor Howe: Do I understand that this committee within the Council has the power to formulate revisions in methods of election or will it come back to the Society?

Mr. Granger: The committee would formulate recommendations to the Council. The Council would decide whether or not to submit them to the vote of the Society in the form recommended or altered.

(The motion was voted on and unanimously carried.)

MEMBERSHIP ELIGIBILITY

Mr. Granger: The question of membership is always before us; that is qualifications of members. There are at least two and perhaps more schools of thought in the Society—one of the liberal school which believes that the objectives of the profession will be best served by admitting to membership in the Society men who have not graduated from schools of forestry but who have by their work shown that they have at least partly absorbed the fundamental principles of forestry and are active disciples of forestry. The other school of thought leans toward the view that the Society is an organization of professional foresters and that in order to establish themselves on a par with other professional organizations, such as the medical profession, membership should be limited to those who can unquestionably be considered as full-fledged professional foresters. Every man on the Council who votes on nominations for membership has to stop and think about that question every time he votes. Every Section and every individual who recommends someone should stop and think about it, and I presume does. We have not gotten the thing settled and along that line there has just been proposed the adoption of a new class of membership which in the eyes of its proponents offers a solution. Mr. Chapman agreed to formulate a statement of what would be involved for informal discussion.

Professor Chapman: In other professions men without a thorough ground work of theoretical training are not allowed to pose as professional practitioners. They are debarred by law because it is understood that these professions guarantee a certain safety to the public in administering to its wants, this certainty being based upon knowledge that these professional men have adequate professional training and that

their recommendations can be accepted with safety. It is a protection to the public. In forestry, and to a certain extent in engineering, but especially in forestry, we have a practical profession dealing with practical matters in which there is no question but that men trained in the field without very much college training can and do develop excellent ability in administration, fire protection, etc. There is a wide field of work for professional foresters but almost all of the field work can be done by men not having a college training. Does this put the profession in a class where it does not distinguish between the professional man and the craftsman? Do we refuse to recognize our profession on its basis with other professions? Must we continue to pursue the policy of trying to obtain solidarity in forestry and in forestry practices by admitting men to full professional grades in the Society who do not have the professional educational basis? The purposes of a professional society are not achieved in this way. It is not a question of working to our own selfish advantages as a profession, so much as it is to achieve the dual purpose of upholding standards in professional practice and protecting the public against charlatanism. We see inroads from unprofessional men—states intending to put men in as heads of the Department of Forestry who have no professional education in forestry. In Connecticut they do not even allow tree surgeons to practice without a license. In Quebec they do not allow the practice of forestry unless the members belong to the Society of Quebec Forest Engineers. Engineers throughout the country are demanding licenses. The forestry profession has to face the future. It seems to me we are at a crisis which we have to face. Here is a suggestion as to how it should be faced. It is a proposed amendment to the constitution which will create a grade of affiliate foresters.

AFFILIATE MEMBERS

Article III. Section 3—Amended. Junior members shall be graduates of a school of forestry approved by the Council. If not engaged in actual forestry work, the candidate for election to this grade must show proof of retaining an active interest in forestry.

Section 3a. Affiliate members shall be those who have not graduated from a school of forestry approved by the Council, but who are engaged in actual forestry work and show proof of at least six years' creditable experience in forestry; provided that one semester of junior or senior work of a satisfactory character in a school of forestry approved by the Council, or one year of study in subjects preparatory to forestry shall be regarded as equivalent to a year of experience. This section shall not be retroactive.

Section 3b. Affiliate members may be advanced to the grade of Junior member under the procedure prescribed in Article IV, Section 1, after passing an examination, the terms and conditions of which shall be prescribed by the Council, which shall show that their knowledge of the field of professional forestry is substantially equivalent to that required for Junior membership.

Amend Article III, Section 1, by inserting the words "Affiliate members" after "Junior members."

Amend Section 2, by inserting the words "Affiliate members" after "Junior members."

Amend Article IV, Section 1, by inserting the words "Affiliate members to that of Junior members and" after the phrase "from the grade of" in second line.

Article IV, Section 2. "Nominations for the grade of Affiliate members and Senior members" substitute for "nominations for all grades of membership except Fellow."

Section 2a. Nominations for the grade of Junior member shall be endorsed by

three voting members and shall be submitted in writing with complete evidence of qualifications to the Secretary-Treasurer.

Question: A degree from an approved forest school is the basis for acceptance as a Junior member in the Society with voting privileges. Affiliate members can join as such without becoming a voting member and have some concessions in dues. This is practically the same basis now as for Junior members. Should Affiliate members be barred from becoming Junior members and Senior members?

Professor Chapman: Affiliate members may be advanced to the grade of Junior members under the procedure outlined above after passing an examination the terms and provisions of which would be set by the Society.

This is not an easy thing to do but other professions do it. It is a loophole and a fair one which does not set aside affiliate members and bar them from professional grades provided they show to the Society that they have obtained the professional standard of knowledge and education needed.

Mr. Granger: This is a pretty important question and it is suggested that free discussion would be helpful to the Council.

Mr. Newins: The suggestion is timely in view of the large number of men interested in forestry and with a forestry background. It might be desirable to take such action as necessary to revise our constitution and enlarge the scope of our membership. I would feel very liberal towards men I know who are qualified in forestry as much as the graduates of forest schools. There are men who have lived with forestry all their lives but do not have the professional qualifications. Some of them have been accepted as Junior members but we have questioned whether they were qualified as such.

I would suggest that it rests upon each individual in the Society to take individual responsibility with reference to membership. I know of several cases personally and others do of former members of the Society who have been kicked out because of lack of paying their dues. I have spoken to some of them. They are men taking an active part in this emergency program. We have important work to do and we should attempt to get them back while they are still on the payroll. I would like to bring out what they will have to do in order to get back into the organization.

Mr. Kelleter: I have the following contribution to make to the discussion at the request of Hubert Hilton who represents the Central Rocky Mountain Section:

"The Central Rocky Mountain Section is dissatisfied with action of the Council in disapproving recommendations for advancement of members to Senior membership. It is very difficult to maintain interest in the Section and to keep up membership in view of isolation. The Section believes that a man who is a practicing forester should not be discriminated against because of the lack of a degree or because he is and has been in a ranger position for several years."

Mr. DenUyl: I agree with Professor Chapman. How soon could the proposed change in membership requirements be brought about since, as Professor Newins said we will have this thing thrust upon us very soon. We in the Ohio Valley Section, when we make recommendations for membership, would like to know within a reasonable time whether the change is adopted or if there is any possibility of its adoption.

Mr. Granger: It will take several months to make constitutional amendments and on a thing as important as this we do not wish to rush it. I see no reason why membership nominations should be held up. They can be presented under the

present system pending the outcome of this proposal.

Professor Chapman: I cannot see how we can depart from the present system until a new one is adopted.

Question: I would like to ask Professor Chapman if this new grade of membership would except the grade of Associate membership. Do you propose to have that done away with?

Professor Chapman: That will continue. The qualifications of the new grade are the same as Junior members except it is a split grade. The Associate grade does not require a forestry training.

Professor Allen: I want to add a word of commendation for this idea. I think we want to protect ourselves from a tendency to enlarge the membership of the Society and lower the standards of the profession due to the fact that the term "forestry" has been battered about to such a great extent. I am very much in favor of this thing if it can be worked out.

Mr Sweet: Would it be contrary to the intent of the proposal of affiliate membership to include men in activities of related forestry work or must it be directly in forestry. For example, we have at the laboratory two or three engineers and chemists whose long contact with work there brought them a keen interest in forestry and they seem to have succeeded in getting into the Society as Senior members. I think some of them hesitate to become Senior members in that they realize they are not technical foresters although their interest and understanding have been in forestry. That new grade of Affiliate membership will be attractive to some who are certainly engaged in activities directly contributory to forestry work.

Professor Chapman: The question of the field of forestry has been broadened by past discussions. This has been the general theory of Junior and Senior

membership; at least the new idea of Junior membership is to insist or try to establish a standard by which a man must know the field in a professional way and not exclusively one portion of it. That affiliate grade could include men of the type you mention who would rather be in that grade than in the Associate grade.

Mr. Preston: I would like to see how the meeting feels on this question. I would like to move that this meeting approve the recommendations of President-elect Chapman and go ahead and put the matter through the usual procedure to a vote.

Mr. Granger: A motion has been made and seconded that this meeting go on record as favoring the proposal of Professor Chapman and ask that the matter be placed before the Society for a vote. (Motion carried.)

Mr. Reed: I would like to answer Newins' question. Men dropped on account of non-payment of dues should pay up their dues for the year in which they were dropped and then they can be nominated for re-election to membership by their Section in due process. The Council is allowed by the Constitution in its discretion to restore men to membership effective on a certain date and waive the initiation fees:

Mr. Granger: On the matter of JOURNAL policy Mr. Reed spoke of. Are there any questions, suggestions or criticisms to be made on the JOURNAL?

Professor Allen: What is the deadline for material on the next issue?

Mr. Reed: In order to get the issue out on the first day of each month, the deadline must be the tenth of the month previous. All copy should go to the printer by the tenth; if there is delay it is not possible to get the magazine out on the first.

SUPPORT OF MEMBERS

Mr. Granger: The President-elect has made one of the objectives of the Society the support of members who are placed in jeopardy for political or other improper reasons. Mr. Chapman, are there any particular phases or suggestions you would like to have covered by general discussion?

Mr. Chapman: I might say briefly that this subject is one that in each case requires very careful consideration of the individual concerned. The good that it done in an investigation by the Society constitutes the protection of the individual against political machinations and protects his reputation as a forester against charges which are unsubstantiated. It may not result in reversal of political decisions but it will have a powerful influence in deterring such action on the part of others who might otherwise rush in. I simply want to stress the fact that there is a service here which should be rendered which is constructive to the last degree. The second point is that it must be very carefully conducted on a strict basis in a careful painstaking determination of facts in each case.

GENERAL DISCUSSION

Mr. Granger: Are there any other matters which anyone thinks should come before this meeting?

Professor Harry P. Brown, New York State College of Forestry, Syracuse, N. Y.: It fell to my lot this year to work up the biographical data that accompanied the ballot and I would like to suggest the possibility of having the Society entertain the idea of getting out a little "Who's Who" in forestry. The idea is that we have many young men coming into the Society—men who do not know the older men, not to mention the other young men. If I had a little book costing say a dollar to a dollar and a half giv-

ing me professional records to date of every member of the Society, it would be decidedly worth-while.

It seems to me it would be a question of cost. I am wondering if perhaps the money could not be secured from outside sources for such a publication. In assembling the biographies we should have a committee to pick out the essentials; go over the biographical data and get it into proper shape and pick out the information which is decided worthwhile. I think this will result in something decidedly worthwhile for the new men.

Mr. Reed: Would there be sufficient demand for the book to permit us to recover the publication costs through selling it: If we could sell say 500 or 600 copies at \$1.50, we might in that way pay for the printing of it.

Mr. A. C. Shaw, U. S. Forest Service, Milwaukee, Wisconsin: I think Professor Brown's idea has more value than may at first be realized. This year we needed foresters in the Forest Service but it was difficult to get a list of what they had accomplished or how they were qualified.

Talking about the classes of membership, what good does it do if no one knows the classification. I should think it worthwhile enough to the profession to have the JOURNAL suspend publication for a month or two and devote the money to issuing such a book.

Mr. Reed: Under the New Deal the government organizations are hiring many foresters. We brought it to the attention of these organizations that they could use the facilities of the Society to help select their men. It is mainly a question of giving publicity to what the Society has to offer in this line. Mr. Granger and his assistants in the E.C.W. in Washington used the Society records freely.

Mr. Barker: With regard to the question of financing the booklet. It strikes me that we could put some advertising

in it which would carry the cost and make the sale of it profitable.

Professor Harry P. Brown: Many of the men in the profession, the older men, are by the nature of their work much in the public eye. There are many other men doing good necessary work for the advancement of forestry but we have no way of checking up readily on these fellows. I would like to know, for example, about the research work of different men. What they have done. I know men in my own field and know of their contributions but I do not know of the contributions of men in other fields. It would be valuable in that way as well as offering a source of information to which the younger men can turn. Certainly if the younger men had such a source, they could look up information on the accomplishments of these men.

Mr. Reed: I wonder if a brief, biographical sketch such as that on the ballot is what would be wanted.

Professor H. P. Brown: This answers only for the men on the ballot.

Mr. Reed: We are reaching out as far as we can in getting contributions to the JOURNAL from foresters who are not very widely known. In connection with articles published in the JOURNAL by such men, we are giving footnotes with brief biographical sketches.

Professor H. P. Brown: Such a booklet if issued should be revised every three to five years. In working up biographical sketches of men I have known for years and thought I knew their work, I found I did not realize the work which they had done in other years nor did I fully appreciate their contributions to the forestry movement in this country. It seems to me we should have something of this sort. Some of the older men in the public eye are listed in the big "Who's Who." Personally, I am in "Men of Science" but there are a good many foresters

making large contributions to the profession who are not in either of these.

Mr. Reed: Do you think we should ask the members if they would buy copies when we secure their biographies?

Professor H. P. Brown: Probably 40 per cent of the men would agree to buy the books, but we should not exclude anyone who does not care to buy the book.

Professor Hosmer: I want to add my indorsement to the general proposal. It does entail cost and work to get together. Perhaps we are talking of including too much. The general scheme, however, is excellent.

Mr. Granger: The proposal is commended to the new administration for consideration.

Professor Burr N. Prentice, Purdue University, Lafayette, Indiana: There has been a good deal of criticism of the present system of election. I do not know how many remember when the system was adopted but suggest that if anyone is thinking of ditching the Hare system and putting in another that they look back into the files. They will find that we had plenty of arguments at that time and they might learn a little as to what the advantages of the Hare system are supposed to offer over the system prior to that. There were lots of objections to the old system.

Mr. Granger: It is proposed when the matter goes to the Society to vote to have a two-column statement—one, the points in favor of the suggested changes, and another showing the advantages of the existing system or disadvantages of proposed changes. That would be an appropriate place to include the information suggested by Prentice.

Member: I have one suggestion which we each might follow. Somebody is going to have a lot of work to do in connection with this preparation of biographies. We can all help by doing our

own part. We could do a lot of it by attending the annual meetings and getting to know some of these men. We have a better idea of the men we vote for as the names occur on the ballot. Another thing which would help. When we travel around the country, we should wear the Society of American Foresters badge.

Mr. Granger: I will now call upon the chairman of the Resolutions Committee to present his resolutions.

REPORT OF RESOLUTIONS COMMITTEE

Mr. Ramsdell: I want to say just one word about the resolutions before reading them because after I say this word I want to ask whether the resolutions should be read as a whole and voted upon as a whole or read separately. I have attempted to build the framework of these resolutions around the confirmation of support of the principles of public and private forest policies in the United States which were adopted by the Society in 1931. We then attempted to confine ourselves to those very few and very outstanding measures of one sort or another which have come to us during the past year.

(The following resolutions were then introduced, discussed and adopted.)

RESOLUTION 1

The members of the Society of American Foresters assembled in their annual meeting at Milwaukee, Wisconsin, express their very keen appreciation of the welcome accorded by the city, through its Mayor, Daniel Hoan; the very great assistance rendered by the Milwaukee Association of Commerce and the courtesies extended by the management and employees of the New Pfister Hotel.

The Society further recognizes the excellent coöperation of the members of the Forest Service of Region 9, particularly the splendid leadership of the Re-

gional Forester E. W. Tinker, and the work of Wm. L. Barker, Jr., and thanks them heartily for contributing so greatly to the success of the meeting. Special thanks is given to Executive Secretary Franklin Reed and his associates for the unstinted service in assuring the meeting's success.

The Society recognizes that Franklin Reed has, in addition to his other duties undertaken the position of Editor of the JOURNAL OF FORESTRY and has met this task not only to the credit of the Society but to himself, and congratulates him on his excellent accomplishment since taking over this duty.

RESOLUTION 2

Whereas the Society of American Foresters in 1931 adopted certain principles of public and private forest policy for the United States;

Be it Resolved, that the annual meeting of the Society reaffirms its commitment to these principles of public and private forest policy adopted in 1931 and notes with gratification the progress made since that time toward achieving the objectives of those principles.

RESOLUTION 3

Whereas the emergency conservation measures of the National Administration have expedited the orderly rehabilitation of American forests, and

Whereas, of these measures the Act of March 31, 1933 (An Act for the Relief of Unemployment and Other Purposes), has made it possible to continue the acquisition of forest lands for public use through the allocation of a fund of \$20,000,000 for this purpose, and to create the Emergency Civilian Conservation Corps which has proved to be an important force in conserving not only our natural resources but the social, spiritual and economic resources of the Nation, as well,

Therefore, Be it Resolved, that this meeting commends these emergency conservation measures and strongly recommends the support of effective steps to bring about continuance of the C.C.C. as a permanent agency of the national government, subject to the rise and fall of unemployment, and conducted at all times, under field supervision chosen for efficiency and merit and free from political influence.

DISCUSSION OF RESOLUTION NUMBER 3

Mr. Bernard Frank, St. Paul: I move that the committee consider that in the event this Emergency Civilian Conservation Corps is made permanent that a motion be made that we get along without the assistance of the Army.

Mr. Granger: It has been moved that we include in the resolution a recommendation that in the continuance of this work the plans be drawn to eliminate participation of the Army.

Professor Herbert: I do not know whether that should appear in the resolution at this time, but taking it from the point of view that I have circulated around and have heard a great deal about the lack of coöperation by the Army Officers, I think we should keep after this thing until the Army is eliminated.

Professor Spring: As a member of the Resolutions Committee in drafting the resolution we dealt with the thing in a broad way specifying the thing which we considered the most important aspect to emphasize. I think bringing an amendment of this sort is poor judgment and am against it simply because it represents only one detail of an organization. You might select other details just as significant as that to put "thumbs down on" but in a resolution of this type it is not one in which to put thumbs down on small details. I move that the amendment not be inserted.

Professor Brown: I had occasion to

travel through New England and also the South and saw a good deal of the work the Army officers were doing. Perhaps there are two sides. I am inclined to think that it is a mistake for this organization to pick out only one thing and introduce it in a resolution which is as broadly and well-stated as we could get. Let's not include any details to confuse us.

Mr. Allen: Perhaps I should defend myself a little here. I would not like to add this recommendation as a part of this resolution. I have found out in rather long experience that there are other ways of accomplishing purposes than by being too frank.

I want to say that the Army has been spanked but they should stay in this thing. I do not believe we should put the amendment in the resolution because of a possibility of disrupting the diplomatic balance of this thing which would be a little bit tragic. Are we so sure we cannot use them in this thing? It is a proposition of going over the top somewhere but we should get a command in to the Army that they should play this game a little better.

Mr. Preston: For a professional organization I think we should be very careful about the criticism of the military men as a profession. It is going too far.

Dr. Korstian: I second Professor Spring and Allen. While the Army officers in my section, in some instances, did lack full coöperation, we did not have the situation referred to by Professor Herbert. I think it very unwise to include this amendment.

Mr. McLaren: I would like to express my ideas. I consider this amendment poor judgment. I want to call attention to one thing. I am Liaison Officer of the Sixth Corp Area at Chicago. Before taking over a job of that kind it might be well to weigh the matter and think about what it is. The Army is handling an im-

mense load, a load which would have bogged us down and made a failure of the C.C.C. undertaking if it had been left to some field agencies already overloaded. The Army men are coöperative and willing to see the thing made a success. We do have individuals in the Army who do not measure up. Very rapidly action is taken to remove a man who is indicated to be a failure from any standpoint. It takes very little in the way of complaint to have that result accomplished. The men in my Corps Area recognize that the C.C.C. movement probably saved the Army. It was about to be cut very materially. They feel that this gave them a bigger job to do and they are better off than they possibly otherwise would be. The job of feeding and housing men and the job of paying the allottees and the men themselves is an enormous one and cannot be fully appreciated until you get into the job and see the work that is being done. I sincerely believe that it could not have been carried on without the coöperation of the Army and the placing on them of responsibility for the housing and paying of the men was a huge task.

Mr. Granger: The question is the proposal to amend the resolution to request that in the continuation of the Emergency Conservation Work plans be made to eliminate participation of the War Department. All those in favor of the resolution say "Aye," opposed, "No." The motion is lost.

Mr. Preston: I was considerably surprised that we should bring a resolution like this before the meeting without any previous discussion. While I am in favor of the C.C.C. movement and do not disagree with the idea of that resolution from the standpoint of the good that it is doing in the forests and from the social benefits as we see it, I doubt whether the resolution should be passed in the form at least in which it is offered because we

are committing the Society of American Foresters and giving our opinion in a big social movement. Nothing has been said about the cost and we are voting on it pretty largely from the standpoint of the forester. If framed purely from that point of view I would be in favor of voting for it.

Mr. Granger: While the constitution provides that 40 members of the Society in a meeting can be considered a quorum and action by such a meeting be in effect an official commitment of the Society, we have invariably followed the policies at these meetings of considering resolutions as merely expressions of the meeting and not official acts of the Society as the meetings always represent far too small a proportion of the membership. There is, of course, always the possibility that it will be taken to represent the thought of the Society, but actually they do not.

Action is desired on the adoption of the resolution. There was only one vote "no" so the resolution is adopted.

(Resolutions 4, 5, and 6 were likewise read, seconded and adopted.)

RESOLUTION 4

Whereas, under the National Industrial Recovery Act, the Code of Fair Competition for the Lumber and Timber Products Industries creates the foundation for early, nationwide action upon and progressive achievement of forest practice on private forest lands, which is one of the major objectives of the Society platform adopted in 1931,

Be it Hereby Resolved, that the meeting of the Society recognizes this measure as one of epochal importance to American forestry; congratulates the lumber and timber products industries on the obligation they have assumed in coöperation with federal and state authorities and commends the whole-hearted assistance of the forestry profession toward

the realization of the objectives of the Code.

RESOLUTION 5

Whereas the report on Senate Resolution 175 (the Copeland Report) outlines a comprehensive program of American forestry,

Be it Therefore Resolved that the annual meeting of the Society of American Foresters endorses the general provisions of this program and urges that every possible effort to carry it out be made by the responsible federal and state and private agencies.

RESOLUTION 6

Be it further Resolved, that the annual meeting of the Society of American Foresters expresses its gratitude and deep appreciation of the vision and inspirational leadership of Franklin Delano Roosevelt, President of the United States, in the cause of conservation in its broadest sense, and that the Society be instructed to send him a copy of these resolutions.

RESOLUTION 7

Whereas American Foresters are confronted with problems of forest management, soil erosion control, forest industry development, popular education and public relief many of which are being faced by several of the foreign countries, the results of whose efforts might well have an influence upon our own activities, and

Whereas, the advantages and opportunities of a forester among the American Agricultural Attaches in Europe has been demonstrated during the two years ending June 30, 1933, but were unfortunately terminated at that time,

Be it Resolved, that the Society of American Foresters, meeting in Milwaukee, Wisconsin, on December 30, 1933, strongly urge the reappointment at the earliest possible date, of a forester among the Agricultural Attaches in Europe.

DISCUSSION OF RESOLUTION NUMBER 7

Mr. Collingwood: I wish to apologize for not having submitted this resolution to the committee. It did not occur to me that it might be indorsed until Professor Hosmer made his report on foreign relations. In line with the avowed purpose, my resolution will fit in with the programs and activities mentioned regarding Ringland, etc. I thought it might be well to bring to the attention of this body a resolution such as the following dealing with a forester among the foreign agricultural attaches.

Mr. Granger: Is there any objection to the introduction of this resolution from the floor? Those in favor, say "Aye." The resolution was adopted.

Mr. Granger: I wish to express to Miss Warren our appreciation of the very fine work she and her two assistants have done. She has contributed in a large measure to the successful management and results achieved by the executive staff of the Society.

Mr. Allen: I would like to move a vote of thanks and appreciation to our retiring president, C. M. Granger. Unanimously carried.

Mr. Granger: It has been a great pleasure and education to me to occupy this office. I have only congratulations for the men given an opportunity to serve in this capacity.

I officially declare the thirty-third annual meeting of the Society of American Foresters adjourned.



ELECTIONS TO MEMBERSHIP

The following men have been elected to the grade of membership indicated:

ALLEGHENY SECTION
Junior Membership

Allison, Jack
Barry, Edward F.
Berg, Lennart Y.
Campbell, Seldon W.
Chalfant, J. Wayne
Davis, Brooke Rosen
Dimmick, Robert S.
Hall, Albert G.
Hawes, Norman E.
Mandeville, Albert E.
Milnes, George S.
Moorhead, George R.
Volweider, Harry

APPALACHIAN SECTION
Junior Membership

Boyd, Ellis Forston
Cooper, John Warner
Fountain, James Davis
Miller, Ivo W.
Rowland, Charles A. Jr.
Titus, Robert U.

CENTRAL ROCKY MOUNTAIN
SECTION

Junior Membership

Carr, Lawrence H.
Lamb, Sam H.

Liedman, Louis, Jr.
Mahan, Stanley A.

Senior Membership

Clarke, Donald E.

GULF STATES SECTION

Senior Membership

Moore, Robert

NEW ENGLAND SECTION

Junior Membership

Adams, Herbert E.
Bratton, Allen W.
Hodgkins, Philip M.
Hubbell, Hubert T.

Senior Membership

Adams, William Richie
Woodman, Charles L.

NEW YORK SECTION

Junior Membership

Clark, Ellis William
Kowal, Joseph R.
McCraw, William E.

NORTH PACIFIC SECTION

Junior Membership

Travis, John Hunt

OHIO VALLEY SECTION

Junior Membership

Beadell, Henry A.
Hasel, Frank Conrad
Holley, Quentin G.
Holroy, H. B.
Lear, W. L.
Lerchen, Robert A.
Spoden, F. G. Jr.
Shumaker, K. I.
Van Akkeren, John Jacob
Weber, Louis A.
Whitsitt, Robert F.
Wise, Harold Franklin

SOUTHEASTERN SECTION

Senior Membership

Schaeffer, C. H.

WASHINGTON SECTION

Honorary Membership

Roosevelt, Franklin Delano

WISCONSIN SECTION

Junior Membership

Ashbaugh, Leonard J.
Griffen, W. Duncan
Hogan, John
Kampmann, Tiftcrist Steve

ANNOUNCEMENT OF CANDIDATES FOR MEMBERSHIP

The following names of candidates for membership are referred to Junior Members, Senior Members and Fellows for comment or protest. The list includes all nominations received since the publication of the list in the January JOURNAL, without question as to eligibility. The names have not been passed upon by the Council. Important information regarding the qualifications of any candidate, which will enable the Council to take final action with a knowledge of essential facts, should be submitted to the undersigned before March 10, 1934. Statements on different men should be submitted on different sheets. Communications relating to candidates are considered by the Council as strictly confidential.

FOR ELECTION TO GRADE OF JUNIOR MEMBERSHIP

<i>Name and Education</i>	<i>Title and Address</i>	<i>Proposed by Section</i>
Airoldi, Louis Univ. of Maine, B.S.F., 1929	Forester, C.C.C. Housatoiné, Mass.	New England
Anderson, Clarke A. Colo. Agric. College, B.S.F., 1931	Foreman, Brooks Forest, Pike N. F., Colo.	Central Rocky Mt.
Barrows, Maynard Colo. Agric. College, B.S.F., 1928	Park Ranger, Yellowstone Park, Wyo.	Central Rocky Mt.
Campbell, Donald W. Univ. of Minn., B.S.F., 1932	Cultural Foreman, Chippewa N.F., Cass Lake, Minn.	Minnesota
Chaikin, Leon Edward Cornell, B.S.F., 1933; M.F., 1934	Graduate Assistant, Dept. Forestry, Cornell Univ., Ithaca, N. Y.	New York
Clouser, Rex Walter Pa. State, B.S.F., 1932	Forester, Ref. Camp No. 93, Analomink, Pa.	Allegheny
Cooper, William E. N. C. State, B.S.F., 1932	Forester, Camp No. 136, Galetton, Pa.	Allegheny
Dahl, Ernest B. Univ. of Minn., B.S.F., 1931	Blister Rust Agent, State Office Bldg., St. Paul, Minn.	Minnesota
Dunlap, William McKee Univ. of Maine, B.S.F., 1932	Forester, C.C.C. Camp No. 53, Sigel, Pa.	Allegheny
Fetzer, Carl D. Pa. State, B.S.F., 1932; Iowa State, 1932-1933, no degree as yet.	Asst. Supt., Camp S-61, Little Orleans, Md.	Allegheny
Ficke, Herman O. Univ. of Idaho, B.S.F., 1931	Technician, N.R.M. Forest and Range Exp. Sta., Missoula, Mont.	Northern Rocky Mt.
Foreman, Harry A. Pa. State; N. C. State, B.S.F., 1931	Forester, C.C.C. Camp 94, Edgemere, Pa.	Allegheny
Hahn, Palmer L. N. Y. State, B.S., 1925	Forest Supervisor, Stokes States Forest, Branchville, N. J.	New York
Holtz, I. Basil Pa. State, B.S.F., 1924	Technical Forester, E. C. W. Camp 58, Mount Union, Pa.	Allegheny
Holmberg, LeRoy A. Univ. of Mich., B.S.F., 1929	Dist. Land Surveyor, Conservation Dept., Bath, N. Y.	New York
Jahn, E. C. N. Y. State, B.S., 1925, M.S. 1926; McGill Univ., Ph.D., 1929	Associate Prof. of Forestry, School of Forestry, Moscow, Idaho.	Northern Rocky Mt.
Kern, Samuel J. Pa. State, B.S.F., 1931	Technical Forester, C.C. S-115, Woodward, Pa.	Allegheny
Kukachka, Emil G. Univ. of Minn., 1933	Blister Rust Checker, E.C.W., Montgomery, Minn.	Minnesota
Laird, Leonard H. Colo. Agric. College, B.S.F., 1932	Foreman, C.C.C., Buffalo Creek, Colo.	Central Rocky Mt.
Leader, J. Norman Pa. State; N. C. State, B.S.F., 1930	Forester, C.C.C. Camp, Bedford, Pa.	Allegheny

<i>Name and Education</i>	<i>Title and Address</i>	<i>Proposed by Section</i>
MacNaughton, Victor B. Univ. of Maine, B.S.F., 1929	Forester, C. M. Woolley Estate, Greenwich, Conn.	New England
McCord, Paul P. Colo. Agric. College, B.S.F., 1925	Project Supt., C.C.C. Camp F-32- C, Cascade, Colo.	Central Rocky Mt.
Marks, Elmer R. Univ. of Minn. B.S.F.	Technician, N.R.M. Forest and Range Exp. Sta., Coeur d'Alene, Idaho.	Northern Rocky Mt.
Miley, Harry C. Univ. of Minn., B.S.F., 1933	Technical Forester, E.C.W., Deer River, Minn.	Minnesota
Muth, Frank T. Pa. State, B.S.F., 1925	Supt. E.C.W. Camp No. 53, Wood- bine, N. J.	Allegheny
Neff, Lawrence P. Univ. of Mont., B.S.F.	Asst. Technician, N.R.M. Forest and Range Exp. Sta., Missoula, Mont.	Northern Rocky Mt.
Olliver, Ephe M. Pa. State, B.S.F., 1931	Party Chief, Acquisition Work, Morehead, Ky.	Allegheny
Orsi, Charles R. Cornell, B. S. F., 1932	Forester, C.C.C. Camp 66. South Lee, Mass.	New England
Pierson, Royale K. Univ. of Mont., B.A., 1930; Univ. of Idaho, M.S.F.	Technician, Div. of Forest Path- ology, Univ. of Idaho, Moscow, Idaho.	Northern Rocky Mt.
Price, Donald E. Univ. of Minn., B.S.F., 1933	Technical Foreman, U. S. Forest Service, Deer River, Minn.	Minnesota
Price, La Mar G. Colo. School of Forestry, B.S., 1933	Forestry Foreman, C.C.C. Camp F- 31C, Buffalo, Colo.	Central Rocky Mt.
Sluzalis, Laurence L. Pa. State, B.S.F., 1931; M.S. in Botany	Technician, U. S. Forest Service, Deer River, Minn.	Allegheny
Sowers, David W. Jr., Cornell, B.S.F., 1929	Supt. C.C.C. Camp S-61, Little Orleans, Md.	Allegheny
Trafton, George E. N. Y. State Ranger, 1929	Camp Forester, C.C.C. Camp No. 57, Aitch, Pa.	Allegheny
Walker, Nat Colo. College, B.S.F., 1933	Foreman, C.C.C. Camp F-32C, Cas- cade, Colo.	Central Rocky Mt.
Ward, William B. N. C. State, B.S.F., 1931	Foreman, C.C.C. Camp No. 52, Wells Tannery, Pa.	Allegheny

FOR ELECTION TO GRADE OF SENIOR MEMBERSHIP

Miller, Edwin L. Colo. Agric. College, Special student in forestry, 1916 (Jun- ior Member 1928)	Senior Forest Ranger, Bighorn N. F., Buffalo, Wyo.	Central Rocky Mt.
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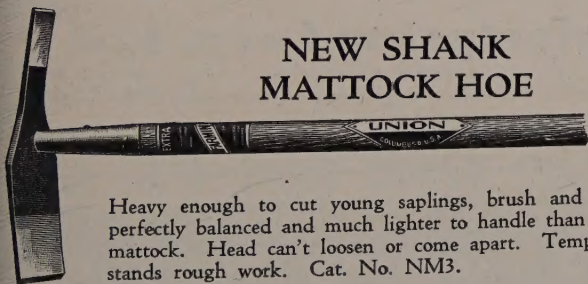
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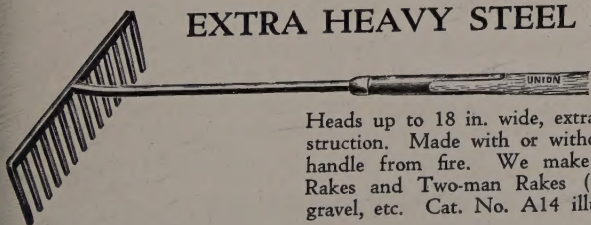
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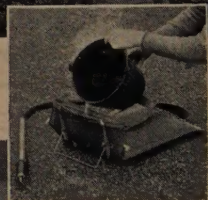
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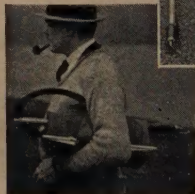
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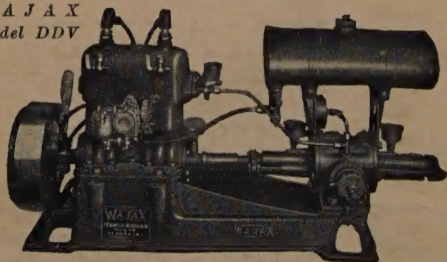
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